

ADMINISTRATIVE RECORD

MORGAN MATERIALS II SITE

BUFFALO, ERIE COUNTY, NY

Prepared for:

U. S. EPA Region II Response and Prevention Branch Edison, New Jersey 08837

Prepared by:

Region II Superfund Technical Assessment and Response Team
Roy F. Weston, Inc
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Edison, New Jersey 08837

DCN #: START - 02 - F - 03416 EPA Contract No.: 68-W5-0019

MARCH - 1999

<u>FACT SHEET</u> Administrative Records in Local Repositories

The "Administrative Record" is the collection of documents which form the basis for the selection of a response action at a Superfund site. Under Section 113(k) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), the EPA is required to establish an Administrative Record available at or near the site.

The Administrative Record file must be reasonably available for public review during normal business hours. The record file should be treated as a non-circulating reference document. This will allow the public greater access to the volumes and also minimize the risk of loss or damage. Individuals may photocopy any documents contained in the record file, according to the photocopying procedures at the local repository.

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The Administrative Record file will be maintained at the local repository until further notice. Questions regarding the maintenance of the record file should be directed to the EPA Regional Office.

The Agency welcomes comments at any time on documents contained in the Administrative Record file. Please send any such comments to Gregory B. DeAngelis, Response and Prevention Branch, U.S. EPA Region II, 2890 Woodbridge Avenue, Edison, NJ 08837.

For further information on the Administrative Record file, contact Gregory B. DeAngelis, On-Scene Coordinator, U.S. EPA Region II, at (732)906-6874.

MORGAN MATERIALS II SITE

ADMINISTRATIVE RECORD GUIDANCE

MODEL FILE STRUCTURE

1.0 SITE IDENTIFICATION

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- 2.6 Amendments to Action Memorandum
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MORGAN MATERIALS II SITE

ADMINISTRATIVE RECORD FILE

MODEL INDEX OF DOCUMENTS

The index of documents contains the following information about each document:

Document #: Site Code (three letters of site name)-Section, First Page-Section - Last Page

EXAMPLE (MMS 1.1001 - 1.1002)

Title:

Abstract of Document Contents

Category:

Document Category/Section of Administrative Record File

Author:

Writer and Affiliation

Recipient:

Addressee or Public and Affiliation, if applicable

Date:

When Document was Created or Transmitted

Note: Items in the Administrative Record are for public access, and should be removed from the file only for copying. The cost of reproduction of the documents in the file is the responsibility of the person requesting the copy.

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- 7.2 Endangerment Assessment
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- 7.4 Consent Decrees
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Document #: MMS 2.7001-2.7022

Title:

Work Plan for Morgan Materials Inc. Superfund Site, Buffalo, New York

Category:

Removal Response

Author:

Safety-Kleen (NE), Inc., North Andover, MA

Recipient:

John Fiore, Maverick Construction Management Services, Marlboro, MA and

Gregory DeAngelis, On-Scene Coordinator, United States Environmental Protection

Agency, Region II, Edison, NJ

Date:

February 4, 1999

Document #: MMS 2.8001- 2.8082

Title:

Health and Safety Plan for the Removal, Preparation, and Shipment of the Gelva

Multipolymer Resin Solution Drums

Category:

Removal Response

Author:

Safety-Kleen (NE), Inc., North Andover, MA

Recipient:

Administrative Order Recipients

Date:

February, 1999

Document #: MMS 7.3001-7.3025

Title:

United Stated Environmental Protection Agency, Region II, Administrative Order

Category:

Enforcement

Author:

Jeanne M. Fox, Regional Administrator, United States Environmental Protection

Agency, Region II

Recipient:

Buffalo Merchandise Distribution Center, Inc., Buffalo, NY; Morgan Materials, Inc.,

Buffalo, NY; Solutia Inc., St. Louis, MO

Date:

September 28, 1998

Title:

Document #: MMS 10.3001 - 10.3002

Notice of Public Availability

Category: Author:

Public Participation

Recipient:

United States Environmental Protection Agency, Region II

General Public

Date:

March, 1999

Document #: MMS 11.2001-11.2002

Title:

EPA Regional Guidance Document

Category: Author:

Technical Source and Guidance Documents

United States Environmental Protection Agency

Recipient:

N/A

Date:

N/A



Work Plan For Morgan Materials Inc. Superfund Site Buffalo, New York

Prepared by: Safety-Kleen (NE), Inc. 221 Sutton Street North Andover, Massachusetts 01845

February 04, 1999

John Fiore - Maverick Construction Managment Services, Inc.

Gregory B. DeAngelis - USEPA On-Scene Coordinator

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1.0 WORK PLAN OVERVIEW

Pursuant to this work plan, Solutia shall provide for the stabilization, segregation, inventory and disposal of approximately 2700 steel 55-gallon drums of Gelva Multipolymer Resin Solution (Gelva®) product owned by Morgan Materials and currently stored by the Buffalo Merchandise Distribution Center, Inc. in Buffalo, New York.

This work plan was generated in response to the US EPA Administrative Order Index number II-CERCLA-98-0213 and the Solutia, Inc. work plan previously submitted on November 24, 1998 to the EPA. In addition to the work plan Safety-Kleen will prepare a Health and Safety Plan in accordance with all applicable guidance documents. The Health and Safety Plan will include a section on air monitoring per Solutia's Project Managers request. The following work plan is designed to complete the work at the Morgan Materials Superfund site in the most timely and cost effective manner possible. Safety-Kleen's basic approach will be to assemble a crew which will combine all the necessary field service functions to properly profile, QA/QC, inventory and prepare for off-site shipment of the approximately 2700 drums of Gelva® product from the site to an approved disposal facility. This is outlined in sections 2.3.5 and 2.3.6 of this work plan which meets the requirements of a transportation and disposal plan per the administrative order. The disposal of the Gelva® product in their existing drum form or in an overpack has been determined to be the most cost effective and efficient means of handling this situation. This eliminates the need to outline any bulking, stabilization and solidification activities in the work plan per the administrative order mentioned above. If this changes, Safety-Kleen will modify it's work plan. In addition, the disposal outlets being utilized will approve the profile based on the existing information on the Gelva® product. This eliminates the need for a sampling and analysis section of the work plan per the administrative order. However, there will be a section describing the handling and characterization of orphan drums that are commingled with the Gelva® drums that are not part of the administrative order.

Maverick Construction Management Services, Inc. (Maverick) has been designated as the Project Coordinator and will oversee all aspects of the above-referenced scope of work and will perform quality assurance for the project.

Maverick will be responsible for oversight of the implementation of all field activities. Maverick will be the focal point for communication between Solutia, the agencies and Safety-Kleen. The resumes of project team members will be forwarded to the US EPA as part of this work plan.

The Safety-Kleen crew will be composed of personnel from our Field Service Group, with major functions being performed by members of both the Projects and Lab Pack teams. The proposed crew, as outlined in the organizational section of this work

plan, will be made up of five personnel. Additional administrative and management support, as required, will be provided by the North Andover Service Center and the Field and Sales offices in New York state.

Safety-Kleen believes that with the proposed work plan and staffing levels, the project can be safely and efficiently completed in six to eight weeks.

1.1 Site Background

The approximate 2700 steel drums of Gelva® are presently stored at the Buffalo Merchandise Distribution Center, Inc. located at 261 Great Arrow Avenue in Buffalo, New York. The warehouse is approximately one million square feet in size. Monsanto manufactured the Gelva® product between 1980 and 1986. The Monsanto drums were sold to Morgan between October 1986 and February 1987 as non-A-grade product. Solutia, Inc. is responding to Administrative Order II-CERCLA-98-0213 for the Morgan Materials Superfund Site.

2.0 Site Operations

The following are the tasks that Safety-Kleen has identified as being the major components of the work plan necessary to complete this project in a timely and efficient manner. Safety-Kleen will use the normal work hours at the site of 7:30 am to 4:30pm initially. The goal is to be able to move two - three loads at a time. This would allow the project to be completed in 30-40 working days. This will be adjusted if necessary based on a review of work flow with the project manager for Solutia, Inc. and Safety-Kleen's site supervisor.

2.1 Mobilization

2.1.1 Personnel (see attachment A)

Safety-Kleen will initially mobilize the following personnel to the site:

One Site Supervisor Two Laborers One Forklift operator One QA/QC Chemist

2.1.2 Equipment

Safety-Kleen will initially mobilize the following equipment to the site:

One Straight Truck

Two Forklifts (one industrial type, one Bobcat)
Misc. Drum Handling Equipment
Health & Safety Equipment
Overpacking Supplies
Office Trailer
Spill Response Equipment (Spark proof shovels, brooms, speedi-dry, poly sheeting, drum plug material)

2.2 Site Set-Up

After mobilization Safety-Kleen will meet with the Project Manager for Solutia Inc. and the on-site coordinator for the EPA to review the site set-up and hold initial site safety meeting. Once this is complete the work areas (see attachment F) will be set-up using caution tape and high visibility fencing to delineate the work areas. There will be two major sections of work areas. One will be for the inspecting, QA/QC and overpacking if necessary. The other will be for staging the drums for shipment. The staging area must be large enough to hold approximately 160 drums. Safety-Kleen will establish a decon area to be used as necessary. An office trailer will be located onsite and powered using existing power source. An electrician will have to be hired to perform this task. This trailer will be available to all personnel working on this project.

In addition to the trailer, a portable sanitary unit will be placed onsite for all personnel to utilize. The trailer will keep all computer, air monitoring equipment and paperwork associated with the job and will be locked everyday at the end of the shift. Our straight truck will be the storage unit for all of the other drum handling equipment and ppe. This truck will also be locked at the end of each shift and potentially be used for transportation on a daily basis. The overpack drums will be stored on the trailer that the will be delivered on and will also be locked at the end of each shift. The work area will be cleaned at the end of each shift and no Gelva® drums will be left in this area overnight. All entrances to work areas will be barricaded with caution tape at the end of each shift.

The final portion of site set-up is to establish egress routes in the event of an emergency. As indicated on the site plan (see attachment F) these alley ways will remain open to allow egress from the work area to the trailer, which will be the primary meeting place in an emergency situation. In the event that both alley ways leading away from the work area are blocked there is an emergency exit directly across from the work area. The staff will then have to reqroup at the trailer from this point.

2.3 Drum Management

As currently staged, many of the drums are inaccessible to the field technicians due to their close proximity and the material currently stored in front of them. Safety-Kleen assumes that Solutia's Project Manager will have all the material blocking these drums moved prior to site setup. Safety-Kleen must go into the warehouse where the drums are currently stored and identify the Gelva® product drums. The Gelva® drums will be identified via labeling from other drums which may be mixed in with them. Unknown drums will be set aside and managed as described in the orphan drum characterization handling section of the work plan. Once the Gelva® drums are identified, Safety-Kleen will move them to the work area to facilitate inspecting, QA/QC and overpacking if necessary.

2.3.1 Movement of Drums to Work Area

The Equipment Operator will move one pallet of drums at a time from where they are currently staged to the work area using a Bobcat. For the top layers of palletized drums, which are poorly stacked, a forklift with drum grabbers will be used to mitigate the hazard of falling drums to the operator and other onsite personnel. Once the pallet of drums is removed from the stack, a canvas strap will be placed around them to prevent them from falling over while being moved to the work area with the Bobcat. Once this is accomplished further management of the drums will be done with a standard industrial forklift.

2.3.2 Drum Inspection

The Gelva® drums will be inspected for DOT acceptability, physical state and product information once the drum is the work area. The Field Chemist or Site Supervisor will check the physical state to determine end disposal site handling method and appropriate billing class. This will be accomplished by properly grounding each drum prior to opening. Once open a sample rod will be inserted to determine the physical state of the material. This will be noted on each drum using permanent marker. In addition any drum that requires overpacking will have any information written on it recorded on a drum information sheet (see attachment B) and attached to the overpack. Next, each drum will be inspected for DOT acceptability. Drums will be visually inspected and physically inspected for holes. weak spots, major dents and closing mechanisms securely in place. These will be tested with a bung wrench and an impact wrench. The drums will be tilted with the aid of a drum dolly to test openhead drums for cover leaks and the integrity of the bottom of all the drums. Openhead drums that leak around the rim will have the bolt and ring assembly tightened if possible as the first measure. If this does not work, the gasket will be replaced and overpacking will be the last means of correcting. Drums that are in good condition with no major dents or holes and have the appropriate closing mechanism and bungs securely in place will be moved to the

staging section of the work area. Drums that have punctures or are extremely dented or bowed or that can not be properly closed will require overpacking. This will be accomplished with the use of a forklift with the appropriate drum lifting equipment to pick up the drum and safely lower it into the overpack. Once this is accomplished the drum will be moved to the staging section of the work area.

2.3.3 Contingency Procedures

The Gelva® drums are in poor condition over all. In order to deal with this situation, the inspection section of the work area will be covered with poly sheeting and diked using Speedi-dry bags. This will allow any potential spills to be contained and cleaned up safely and efficiently using level B personnel protective equipment (ppe) and plastic shovels, brooms and speedi dry as described in the Health and Safety Plan. Review of air monitoring results may allow for down grading the level of ppe needed in a spill situation. In addition a DOT cubic yard container will be staged here to put any spill material into it. This will prevent any further potential threat to the environment or personnel onsite. This container will also be used for any other contaminated ppe from the overall work requiring proper disposal as a hazardous waste. Any spills will be reported to Solutia's Project Manager via Safety-Kleen Site Supervisor and recorded in the daily reports.

2.3.4 Drum Tracking

In the staging area the Site Supervisor his designee will assign each drum a unique drum tracking number. The drum tracking number will be printed neatly on both the top and side of each drum using a permanent marker. All the appropriate markings, size, physical state and the drum number will be recorded on the drum tracking form (see attachment C). Next each drum will have the appropriate DOT and EPA labels affixed to it per proper DOT specifications. The drums will then be staged and scheduled for pick up by an approved transporter. The drum tracking form will be submitted as part of the report prepared by the site supervisor.

2.3.5 Drum Disposal

The Gelva® product has the ability to self-cure (i.e. solidify) on it's own over time. Based on this product information supplied to us and the visual verification of this on our site visit January 27, 1999, Safety-Kleen will have to utilize two disposal facilities (see attachment E) to properly handle the material. The physical state determined by the QA/QC will determine which facility the material is routed to. If the material is a pumpable liquid or sludge it will go to Safety-Kleen LTD facility in Corunna Ontario, Canada. In order for us to get the material to Safety-Kleen LTD, we will have to pass it through CECOS in Niagara, New York and Safety-Kleen (Thorold) and then to Safety-Kleen Mississauga for fuels blending prior to final disposal at Safety-Kleen

LTD. This route is based upon CECOS's export notification established with the US EPA and Environment Canada.

If the material is solidified or so viscous (i.e. sample rod can not be passed through) it will be routed to Safety-Kleen (New Castle) facility in Smithfield, Kentucky, for fuels blending and final disposal will take place at Safety-Kleen (Bridgeport), Inc. facility in Bridgeport, New Jersey.

2.3.6 Drum Shipments

Once the final disposal facilities have been approved by Solutia and the EPA, profiles will be completed by Safety-Kleen and submitted for approval. The profile will be completed based on the available information on the Gelva® product and field characterization will not be necessary. This will be completed prior to mobilization if at all possible so that we can expedite the shipments of waste and not hinder any of the onsite operations. Manifests, LDR's and labels will be generated at one of the Safety-Kleen offices. Maverick Construction management will be on hand to sign the manifests and LDRs. Drum shipments will be made after an initial amount of Gelva® drums have been prepared. The plan will be to schedule trucks with one of the transporters (see attachment D) that was submitted to Solutia's Project Manager for review and to move two to three loads at a time.

2.4 Daily Reporting

The Site Supervisor will complete a daily report. This report will record the basic operations of each day. The report will include any health and safety issues, change in work plan, number of drums processed, number of shipments and any other pertinent information from the daily activities. In addition to this an updated version of the drum tracking report will be attached. A copy of this will be submitted to Solutia's Project Manager on a daily basis.

2.5 Cleanup Activities

Once all drums have been removed from their present location, the areas will be inspected for residual product that may have leaked from damaged drums. Any spill residue will be cleaned up with the appropriate tools. The residual product will be placed into appropriate DOT containers for disposal. The inspection and overpacking area will be cleaned up by removing all the containment material. Any of this material contaminated with Gelva® product will be disposed of properly. All tools will be either decontaminated as described in the HASP or disposed of accordingly. The work area floors will also be inspected for any residual product that may have leaked during operations and be cleaned up and placed into the appropriate DOT container for disposal.

2.6 Demobilization

Upon shipment of the final drummed product off-site, site demobilization activities will commence. Safety-Kleen will send all appropriate documentation to Solutia's Project Manager to prepare the final report to the EPA.

Attachment A

PROJECT STAFFING AND ORGANIZATIONAL STRUCTURE

This section outlines the key personnel that Safety-Kleen proposes to apply to this project. All key personnel taking part in this project will be members of Safety-Kleen's Projects and Lab Packing crews. They are extensively trained, with qualifications that meet or exceed all applicable EPA, OSHA and Safety-Kleen requirements.

Safety-Kleen proposes to operate this project with nine hour work days. It is estimated that this project will require 30 to 40 working days to complete using the crew outlined below and five day work week.

Safety-Kleen proposes to employ a 5-man crew to perform this work. The on-site personnel will be supplemented as necessary with personnel at Safety-Kleen's facilities in North Andover, Massachusetts and Syracuse, New York.

The following are the major job classifications that Safety-Kleen will employ in the performance of this project.

Site Supervisor: Wendell Hall

The Site Supervisor will be directly responsible for all on-site activities. He will be the primary Safety-Kleen-client interface during the performance of the work. The Site Supervisor will manage each member of the group and track the project schedule to determine adherence to the proposed timetable. The Site Supervisor will be responsible for coordinating administrative assistance from other Safety-Kleen facilities as it is required. He will also function as the Site Safety Officer.

Site Safety Office: Wendell Hall

The Site Safety Office will be responsible for the implementation and enforcement of the approved site safety plan. This will include daily site safety meetings, on-site training as required, determination of the appropriate PPE level, air monitoring and first aid. The SSO will have the authority to halt work if conditions on the site pose a threat to the health of workers or the environment.

Equipment Operator: Steve Solano

The Equipment Operator will be responsible for the movement and staging of drums within the facility. This will primarily focus on the movement of drums from their existing locations into the work area.

Field Chemist: Joe Raymond

One Field Chemist will be used in the Safety-Kleen team. The Field Chemist will be responsible for all on-site QA/QC work and assist with the shipping documentation. This individual will also help prepare the data received for review by Solutia's Project Manager and the EPA.

Technician

It is estimated that two technicians will be used in the Safety-Kleen team. They will assist the Field Chemist and the Equipment Operator with the movement and preparation of the Gelva® drums as directed by the Site Supervisor.

Attachment B

DRUM INFORMATION SHEET

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Attachment C

Drum Tracking Form

The Site Supervisor will be responsible for maintaining a drum tracking form which will be updated daily. This tracking form will include the following parameters:

- Safety-Kleen Drum Number
- Solutia Lot Number
- Solutia Product Name
- Approval Code
- Physical State
- Drum Size
- Manifest Document Number
- · Shipping Date
- Destination

This tracking form will be submitted to Solutia's Project Manager for final report preparation to the EPA at the end of the project.

Attachment C

Drum Tracking Form

Safety- Kleen Drum #	Solutia Lot#	Solutia Product Name	Approval Code	Physical State	Drum Size	Manifest Document #	Shipping Date	
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			·					

Attachment D

Transporters

Tri-State Motor Transit Co. East Seventh Street Joplin, MO 64802

EPA ID# MOD095038998

Dart Trucking Company, Inc. 61 Railroad Street Canfield, OH 44406

EPA ID# OHD009865825

Franks Vacuum Truck Services, Inc. 4500 Royal Avenue Niagara Falls, NY 14303

EPA ID# NYD982792814 (they also have van trailers)

Attachment E

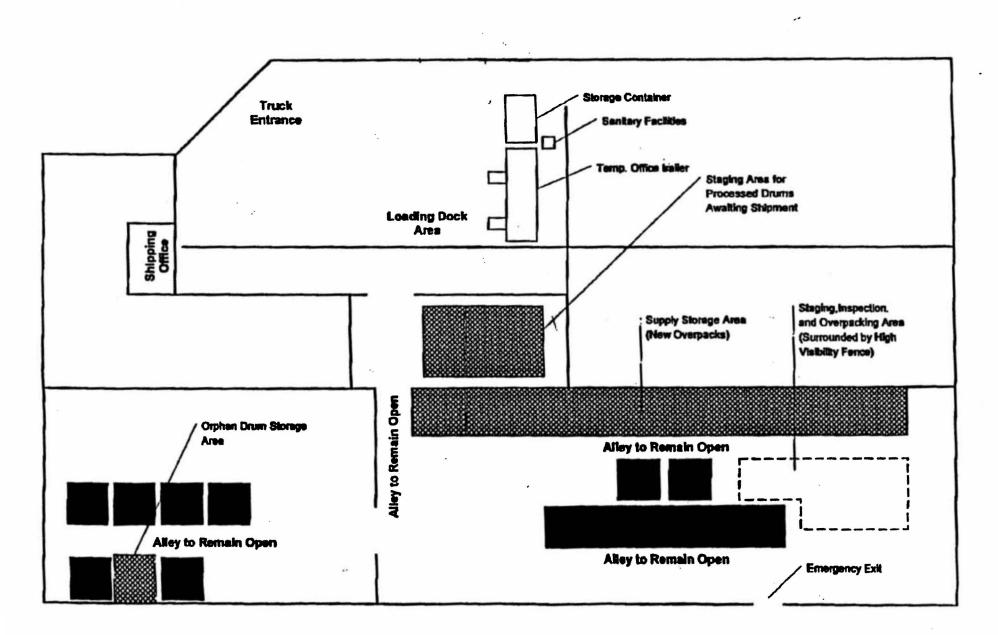
Disposal Facilities

Safety-Kleen LTD 4090 Telfer Road RR#1 Corunna Ontario NON 1G0 Tel#: 519-864-1021

EPA ID# MIT270019904

Safety-Kleen (Bridgeport), Inc. Route 322 West at I-295 Bridgeport, NJ 08014 Tel#: 609-467-3100 EPA ID# NJD053288239

Morgan Materials Site Plan



Attachment G

ORPHAN DRUM WASTE CHARACTERIZATION AND HANDLING PLAN

After being segregated from the Gelva® drums, the orphan containers will be handled by the chemist who will examine the drums for characterization on a daily basis. The orphan drums that Safety-Kleen encounters each day will remain in the inspection area until the end of each day. These drums are not part of the Administrative Order. Safety-Kleen's plan assumes that all orphan drums have no information available about them. At that time the Field Chemist and a Technician, both on level B ppe, will examine/open to sample each drum to perform field identification. All other nonessential personnel will be removed from this portion of the work area. The drums will be examined for labeling, which may or may not be useful. If the nature and identity of the wastes are known from the label, physical observations and possible chemical tests will be performed for confirmation.

If the nature and identity of the drums are not readily known, the chemist will use physical observations and simple field chemistry tests as necessary to determine the nature and general characteristics of the wastes. The goal of this identification process is not to be able to name the compound specifically, but to be able to properly segregate incompatible materials for safe storage at this site.

Physical Observations:

Physical observations, including color, viscosity, layering, and physical state, may enable the chemist to recognize the material based on past experience. In addition, physical characteristics can provide information about proper handling of the material.

Chemical Tests:

Simple field chemical tests are chosen by the chemists based on the physical observations, as necessary to provide further information on the nature of the material or to confirm identification based on chemical characteristics. The following characteristics are typically tested for information essential for the segregation and safe handling of chemically incompatible materials:

pH:

Indicates acidity or alkalinity of materials so that they may be segregated from incompatible materials; pH less than 2 or greater than 12.5 indicates corrosive wastes requiring segregation from each other.

Water Reactivity:

Indicates that material should not be stored near the

aqueous materials.

Cyanides:

Indicated incompatibility with acidic materials.

Oxidizer:

Indicated incompatibility with organic materials.

HNU Meter:

Determine if organic material.

Table 1 briefly describes the field kit procedures used to perform these tests.

Table 1

Field Kit

- 1. ChloropHast pH Strips: Gives the full range 0-14 in increments of 1, individual strips made of plastic for easy use and reading.
- 2. Potassium Iodine Strips: Place a small amount of material in a test tube than add some water (if solid) and look for the following color change:

Brown /Black- Oxidizer

- 3. Cyantesmo Paper Place 2 ml of alkaline material in a test tube add 2ml of sulfuric acid. Place a piece of paper just above the liquid line in the test tube and secure it with a stopper. Shake sample slightly. Place in a tray and wait 15 minutes, if the paper turns blue, positive cyanide.
- 4. HNU Meter Determines organic content.

Equipment Needed:

ChlorpHast pH Strips Sulfuric Acid Potassium Iodine Strips Water Test Tubes and Stoppers HNU Meter Once the chemist has performed the characterization referenced above on an orphan drum, it will be assigned a unique field identification number. This number will be clearly written on both the side and the top of each drum with permanent marker. The results of the testing will be recorded on a Characterization Data Sheet (see Attachment H). Any applicable hazardous material labels will be affixed to the drum to aid in the recognition of its hazard. All orphan drums will be moved to an area designated by Maverick Construction Management Services, Inc. referenced on the site plan. The drums will be segregated by hazard classes per DOT requirements in this area. The data sheets will become part of the daily report submitted to Maverick. A final drum grid and data sheets will be compiled for the final reports being prepared by Maverick. Again, the purpose of this is to leave these drums in a safe storage condition to help mitigate any hazards to continuing activities associated with or around these drums upon our final demobilization from this site. In addition, the characterization data should not be assumed to be sufficient information to determine the future disposition of these drums. 053288239

Attachment H

Characterization Data Sheet

pH Test Results	Water Reactivity		Cyanides Y/N	Oxidizer Y/N	HNU Meter Reading
	Y/N	Miscible Floats/Sinks			3
	pH Test Results		Miscible	pH Test Results Water Reactivity Y/N Miscible	pH Test Results Water Reactivity Y/N Y/N Miscible

HEALTH AND SAFETY PLAN

for the
Removal, Preparation and Shipment
of the
Gelva Multipolymer Resin Solution Drums

Morgan Materials Site 261 Great Arrow Avenue Buffalo, New York

Prepared by:

Safety-Kleen(NE), Inc. 221 Sutton Street North Andover, Massachusetts 01845





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HEALTH AND SAFETY PLAN

1.0 LOCATION

Morgan Materials Site 261 Great Arrow Avenue Buffalo, New York

2.0 SITE DESCRIPTION

The site consists of approximately 2700 55-gallon, steel drums of Gelva®, a polymer resin produced by the Monsanto company, located in a storage warehouse at the Buffalo Merchandise Distribution Center, Inc., 261 Great Arrow Avenue, Buffalo, Erie County NY. The warehouse is about 1 million square feet in size. The drums were purchased by Morgan Materials between 12 and 13 years ago and are now in generally poor condition.

3.0 SCOPE OF WORK/TASKS

Safety-Kleen tasks at this site that are addressed by this HASP include:

- 1. Site Mobilization
- 2. Movement of stacked drums to work area
- 3. Drum inspection and testing, known and unknown contents
- 4. Over packing selected drums
- 5. Transportation vehicle loading
- 6. Site clean-up and demobilization

This plan discusses the hazards involved in performing these tasks and appropriate control methods to be used. Revisions to this plan may become necessary as further information is developed or becomes available. These tasks are detailed in the site Work Plan.

4.0 OFF - SITE ORGANIZATION

Name:

Kevin Poulin

Title:

Field Services Operations Manager

Phone Number:

(978)683-1002 or

(978) 685-2124, x5362

Name:

Scott Soucy

Title:

Health and Safety Officer

Phone Number:

(978)683-1002 or

(978) 685-2124, x5342

5.0 ON - SITE ORGANIZATION

Name:

Wendell Hall

Title:

Lead Site Operator (Site Supervisor)

Duties:

Oversee all operations and personnel, including sub-contractors,

- Implement HASP, conduct site safety meetings, inspect site audits to assure compliance with HASP, conduct air monitoring,
- Investigate and report findings of any onsite incidents, assure corrective actions are implemented,
- Coordinate operations with other organizations on site,
- Supervise activities of site technicians, monitor technician compliance with HASP requirements,
- Interface with all onsite organization and agency representatives.

Name:

Joe Raymond

Title:

QA/QC Chemist:

Duties:

- Perform prescribed field testing on all drums and assist with preparation of paperwork for drum transportation.
- Inspect drum integrity to determine which containers are shippable and which require over packing.
- Work in a manner which that promotes personal safety and the safety of co-workers,
- Use all equipment provided by the company in a safe and responsible manner as instructed by the Site Supervisor,
- Comply with all requirements of this HASP.

Name:

Steve Solano

Title:

Site forklift operator

Duties:

- Work in a manner which that promotes personal safety and the safety of co-workers,
- Use all equipment provided by the company in a safe and responsible manner as instructed by the Site Supervisor.
- Comply with all requirements of this HASP.

Perform daily inspections of all powered material handling equipment on site.

Name(s):		
Title:	Site Technician	
TD 45		

Duties:

- Work in a manner which that promotes personal safety and the safety of co-workers,
- Use all equipment provided by the company in a safe and responsible manner as instructed by the Site Supervisor,
- Comply with all requirements of this HASP.

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6.0 EMERGENCY PHONE NUMBERS

All emergencies:

911

Police:

(716) 851-4444

Fire:

(716) 851-5333

Hospital:

(716) 447-6100 or (716) 447-6216

Directions to Hospital: Kenmore Mercy Hospital, Elmwood Avenue, Kenmore, NY

From the site turn right onto Great Arrow Avenue, turn right (North) onto Elmwood Avenue. Proceed approximately 2.7 miles. The hospital is at the intersection of Elmwood Ave. and Westchester Blvd.

USEPA On-Scene Coordinator Gregory B. DeAngelis	e •	(732)906-6874
Maverick Project Manager	• .	
John Fiore	_	(508) 485-7872
	Pager	(800) 505-4740
National Response Center		(800) 424-8802
•	or	(732) 548-8730
New York State DEC		(800) 457-7362
Regional Poison Control Center		(800) 962-1253
TSCA Hotline	٠. "	(800) 424-9065
		(202) 544-1404
RCRA Hotline		(800) 424-9346
Chemtrec		(800) 424-9300
ATF (Explosives Information)		(800) 424-9555
U.S. DOT Hotline		(202) 426-2075
Pesticide Information Service		(800) 845-7633
Center for Disease Control		(404) 452-4100

7.0 GENERAL SAFETY RULES

- 1. Prior to the start of, or a change in, activities, a Site Safety Briefing will be held for all Safety-Kleen employees and sub-contractors. This safety briefing will include: review of anticipated site hazards, safe work practices, site decontamination, site evacuation and escape procedures, and a review of the daily activities. This meeting will be documented using the standard Site Safety Briefing form. See Attachment 6.
- 2. A stocked industrial first aid kit will be located in the work area and accessible at all times.
- 3. Eating, smoking, drinking, or chewing gum or tobacco is strictly prohibited in the work areas. Specific areas will be determined for these activities. Persons leaving contaminated areas will wash hands and face prior to performing these activities.
- 4. Multipurpose dry chemical fire extinguishers will be located in the work areas.
- 5. All tools and equipment will be spark proof where necessary or required.
- 6. Two fully charged SCBAs will be maintained on site for emergencies.
- 7. All personnel on site will be medically approved to perform the anticipated tasks, and to wear the required protective equipment including respiratory protection.
- 8. No horseplay is allowed on site.
- 9. All accidents and incidents will be immediately reported to the Lead Site Operator and the Maverick contact.
- 10. Hard hats will be worn at all times in the exclusion and contamination reduction zones.
- 11. The buddy system will be used in the exclusion and contamination reduction zones, or any other areas as determined by the Lead Site Operator.
- 12. Eyewashes will be located in areas where there is potential contact with corrosive materials and any other area as determined by the Lead Site Operator.
- 13. All Maverick Site Safety Requirements will be followed at all times during the Project.

8.0 SITE HAZARDS

This section provides information on the potential hazards, chemical and physical that workers will be exposed to while working at the site. Specific chemical hazards are listed and physical hazards are addressed by the tasks listed in section 3.0.Material Safety Data Sheets for the listed substances, and for hazardous materials Safety-Kleen will bring on site can be found in Attachment 2.

8.1 Chemical Hazards

Known chemical hazards that are associated with work at the Morgan Materials Site include:

Morgan Materials Site February 10, 1999

- Gelva® Multipolymer resin solution, upon manufacture this material contained:
 - · vinyl acetate-acrylate multipolymer
 - · vinyl acetate
 - toluene
 - n-heptane
 - ethyl alcohol

Unknown or other materials

Drums with unknown contents exist onsite. These drums will be field tested and segregated by hazard class. Some of these drums are labeled as to the contents others are not.

Chemicals SK may bring on site include:

- Gasoline
- Diesel Fuel
- Speedi-dri (absorbent clay)

Potential routes of entry associated with the listed materials include;

- inhalation
- skin contact

8.2 Task Hazard Analyses

This section identifies the hazards associated with each site task and indicates the preferred control methods for the each hazard. Tasks correspond to the list in section 3.0, but may be broken down into multiple steps based on the site work plan.

8.2.1 Task Hazard Analysis for:

Task1: Site Mobilization				
Steps	Potential Hazards	Control Methods		
Site set-up	 Strains and sprains Slips, trips and falls Cuts/punctures Noise Cold Stress 	Review proper lifting technique with workers Utilize mechanical assistance in lifting Keep debris, tools and equipment orderly and away from travel lanes Mark obstructions if not able to eliminate them Use work gloves for handling equipment or any items with sharp edges Hearing protection when noise levels are above 85 dbA Provide adequate rest breaks in heated area Provide drinking water to prevent dehydration		

Morgan Materials Site February 10, 1999

8.2.2 Task Hazard Analysis for:

Steps	Potential Hazards	Control Methods
Forklift operation (Operator)	Noise Exposure to contaminants Fire/explosions Personnel injury and equipment damage Cold Stress Instability of work surface due to deteriorated wood flooring	 Hearing protection when noise levels are above 85 dbA Use PPE as required per HASP Monitor for toxic materials as indicated in HASP Maintain fire extinguisher in work zone Monitor for combustible vapors in work zone during drum moving Check travel lane before moving, esp. backing Provide adequate rest breaks in heated area Provide drinking water to prevent dehydration use large, pneumatic tired fork lift during this activity Inspect flooring before allowing forklift to travel
Forklift operation (Workers)	Noise Exposure to contaminants Fire/explosions Sprains and Strains Slips, trips and falls Caught in or between moving parts or objects Struck by moving objects or equipment Struck by falling objects	 Hearing protection when noise levels are above 85 dbA Use PPE as required per HASP Monitor for toxic materials as indicated in HASP Maintain fire extinguisher in work zone Monitor for combustible vapors in work zone during drum moving Review proper lifting technique with workers Utilize mechanical assistance in lifting Keep debris, tools and equipment orderly and away from travel lanes Mark obstructions if not able to eliminate them Inspect floor condition prior to activity Use work gloves for handling equipment or any items with sharp edges Do not work in vicinity of forklift Instruct workers of unsafe area around forklift when operating
Manual drum moving	Exposure to contaminants Fire/explosions Sprains and Strains Slips, trips and falls Caught in or between moving parts or objects Struck by moving objects or equipment Struck by falling objects	Use PPE as required per HASP Monitor for toxic materials as indicated in HASP Maintain fire extinguisher in work zone Monitor for combustible vapors in work zone during drum moving Review proper lifting technique with workers Utilize mechanical assistance in lifting Keep debris, tools and equipment orderly and away from travel lanes Mark obstructions if not able to eliminate them Inspect floor condition prior to activity Use work gloves for handling equipment or any items with sharp edges Instruct workers of unsafe area around forklift when operating

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8.2.3 Task Hazard Analysis for:

Task 3: Drun	Task 3: Drum inspection and testing, known and unknown contents		
Steps	Potential Hazards	Control Methods	
Opening drums	Exposure to contaminants Fire/explosions Sprains and Strains Cuts and punctures Slips, trips and falls Caught in or between moving parts or objects Struck by moving objects or equipment Cold Stress	 Use PPE as required per HASP Monitor for toxic materials as indicated in HASP Maintain fire extinguisher in work zone Monitor for combustible vapors in work zone during drum moving Review proper lifting technique with workers Utilize mechanical assistance in lifting Use work gloves for handling equipment or any items with sharp edges Keep debris, tools and equipment orderly and away from travel lanes Mark obstructions if not able to eliminate them Use work gloves for handling equipment or any items with sharp edges Do not work in vicinity of forklift Instruct workers of unsafe area around forklift when operating Provide adequate rest breaks in heated area Provide drinking water to prevent dehydration 	
Field testing	 Exposure to contaminants Fire/explosions Cuts and punctures Slips, trips and falls Cold Stress 	 Use PPE as required per HASP Monitor for toxic materials as indicated in HASP Maintain fire extinguisher in work zone Monitor for combustible vapors in work zone during drum moving Provide adequate rest breaks in heated area Provide drinking water to prevent dehydration 	

8.2.4 Task Hazard Analysis for:

Steps	Potential Hazards	Control Methods
Over packing drums	Exposure to contaminants Fire/explosions Sprains and Strains Cuts and punctures Slips, trips and falls Caught in or between moving parts or objects Struck by moving objects or equipment Cold Stress	 Use PPE as required per HASP Monitor for toxic materials as indicated in HASP Maintain fire extinguisher in work zone Monitor for combustible vapors in work zone during drum moving Review proper lifting technique with workers Utilize mechanical assistance in lifting Use work gloves for handling equipment or any items with sharp edges Keep debris, tools and equipment orderly and away from travel lanes Mark obstructions if not able to eliminate them Use work gloves for handling equipment or any items with sharp edges Do not work in vicinity of forklift Instruct workers of unsafe area around forklift when operating Provide adequate rest breaks in heated area Provide drinking water to prevent dehydration

8.2.5 Task Hazard Analysis for:

Task 5: Transportation	Task 5: Transportation vehicle loading			
Steps	Potential Hazards	Control Methods		
Forklift operation (Operator)	Noise Exposure to contaminants Fire/explosions Personnel injury and equipment damage Cold Stress	Hearing protection when noise levels are above 85 dbA Use PPE as required per HASP Monitor for toxic materials as indicated in HASP Maintain fire extinguisher in work zone Monitor for combustible vapors in work zone during drum moving Check travel lane before moving, esp. backing Provide adequate rest breaks in heated area Provide drinking water to prevent dehydration		
Forklift operation (Workers)	Noise Exposure to contaminants Fire/explosions Sprains and Strains Slips, trips and falls Caught in or between moving parts or objects Struck by moving objects or	 Hearing protection when noise levels are above 85 dbA Use PPE as required per HASP Monitor for toxic materials as indicated in HASP Maintain fire extinguisher in work zone Monitor for combustible vapors in work zone during drum moving Review proper lifting technique with workers 		
	equipment	Utilize mechanical assistance in lifting Keep debris, tools and equipment orderly and away from travel lanes Mark obstructions if not able to eliminate them Use work gloves for handling equipment or any items with sharp edges Do not work in vicinity of forklift Instruct workers of unsafe area around forklift when operating		
Manual drum moving	Exposure to contaminants Fire/explosions Sprains and Strains Slips, trips and falls Caught in or between moving parts or objects Struck by moving objects or equipment	Use PPE as required per HASP Monitor for toxic materials as indicated in HASP Maintain fire extinguisher in work zone Monitor for combustible vapors in work zone during drum moving Review proper lifting technique with workers Utilize mechanical assistance in lifting Keep debris, tools and equipment orderly and away from travel lanes Mark obstructions if not able to eliminate them Use work gloves for handling equipment or any items with sharp edges Do not work in vicinity of forklift Instruct workers of unsafe area around forklift when operating		

8.2.6 Task Hazard Analysis for:

Steps	Potential Hazards	Control Methods	
Site set-up	Strains and sprains Slips, trips and falls Cuts/punctures Noise Cold Stress	 Review proper lifting technique with workers Utilize mechanical assistance in lifting Keep debris, tools and equipment orderly and away from travel lanes Mark obstructions if not able to eliminate them Use work gloves for handling equipment or any items with sharp edges Hearing protection when noise levels are above 85 dbA Provide adequate rest breaks in heated area Provide drinking water to prevent dehydration 	

9.0 PERSONAL PROTECTIVE EQUIPMENT

The level of protection and the components thereof will vary for specific tasks and work areas. The personal protective equipment (PPE) indicated below is a minimum for the indicated task. Changes may be required in the level of respiratory protection depending on monitoring results as indicated. Protective clothing material to be used against specific contaminants is indicated below.

9.1 Required Components

Components of protective equipment are indicated based on the specific tasks to be performed. Tasks are segregated by the level of protection required for each.

9.1.1 Level D Activities

Activities	Hazards	Area	Equipment
General site activities.	Struck by flying objects.	Eye	ANSI approved safety glasses with side shields.
Task 1: Site mobilization	Cuts, punctures and abrasions from sharp objects and tools	Hands	Leather work gloves when handling tools and equipment.
Task 2: Movement of stacked drums to work area	Struck by dropped objects or machinery. Struck against objects.	Feet	Steel toed leather safety boots.
Task 5: Transportation vehicle loading	Contact with material/flashes	Body	Work uniform with long sleeved shirts.
Task 6: Site clean-up and demobilization	Struck by falling material	Head	Hard hat if overhead hazard exists.
	Noise from equipment	Hearing	Ear plugs if levels exceed 85 dbA.

9.1.2 Level C activities

Activities	Hazards	Area	Equipment
	Struck by flying objects.	Eye/Face	Respirator face shield
Task 3: Drum inspecting and testing, known contents	Chemical contact. Cuts, punctures	Hands	Chemical protective glove for the contaminant of concern. Inner and outer chemical gloves are required. Leather gloves when handling /moving drums.
Task 4: Over packing drums	Struck by dropped objects or machinery. Struck against objects. Contact with chemicals.	Feet	Steel toed leather safety boot with chemical over boot or steel toed chemical boot.
	Splashes and contact with chemicals.	Body	Chemical coverall with hood for the chemical of concern. Work uniform with long sleeved shirt.
	Exposure to site contaminants via inhalation.	Respiratory	APR with appropriate cartridges (or supplied air as indicated based on air monitoring).
	Struck by falling material	Head	Hard hat if overhead hazard exists.
· 	Noise from equipment	Hearing	Ear plugs if levels exceed 85 dbA.

9.1.3 Level B activities

Activities	Hazards	Area	Equipment
Spill clean-up	Struck by flying objects.	Eye/Face	Respirator face shield
Task 3: Drum inspection and testing, unknown contents	Chemical contact. Cuts, punctures	Hands	Chemical protective glove for the contaminant of concern. Inner and outer chemical gloves are required.
	Struck by dropped objects or machinery. Struck against objects. Contact with chemicals.	Feet	Steel toed leather safety boot with chemical overboot or steel toed chemical boot.
	Splashes and contact with chemicals.	Body	Chemical coverall with hood for the chemical of concern. Work uniform with long sleeved shirt.
	Exposure to site contaminants via inhalation.	Respiratory	Supplied air breathing equipment
	Struck by falling material	Head	Hard hat if overhead hazard exists.
	Noise from equipment	Hearing	Ear plugs if levels exceed 85 dbA.

9.2 Protective Materials

Protective materials for coveralls and gloves are specified for each site contaminant. The potential for contaminants to be mixed was considered in the selection. Appropriate air-purifying respirator cartridges are indicated.

Protective material for drums, other than Gelva resin, that are labeled as to the contents will be determined by the Site Supervisor as the information is available. These drums may be treated as unknowns at the Site supervisors discretion.

Substance	Coverall	Glove - Inner/outer	APR cartridge*
Gelva® resin Saranex		Nitrile (n-dex)/Nitrile	Organic Vapor/P-100
Unknown materials Saranex		Silver shield/nitrile	NA.

10.0 DECONTAMINATION

10.1 Personnel Decontamination

Personnel decontamination will be conducted in the contamination reduction zone (CRZ). For workers in level C or level B protection decontamination will consist of the following stations, at a minimum:

- a tool drop,
- a boot wash and rinse (if reusable boots are used),
- boot and outer glove removal,
- outer garment removal,
- respirator removal, wash and rinse,
- inner glove removal.
- hands and face wash.

Boot wash solutions will consist of a mild alkaline solution.

All decontamination stations will be lined with polyethylene sheeting. Worker egress from the exclusion zone will be prohibited except by way of the decontamination area. All workers will use proper doffing procedures when removing contaminated clothing. After doffing PPE, workers will wash hands and face with soap and water. All contaminated disposable PPE and polyethylene will be containerized and disposed of properly. Personnel assisting in the decon process at this site will be required to wear modified level D PPE consisting of the following components:

- Porous tyvek coverall,
- nitrile gloves,
- Safety glasses.

10.2 Equipment Decontamination

Equipment decon will consist of a two step procedure. Reusable equipment will be washed with a mild alkaline solution and rinsed. All decon liquids will be collected for proper disposal. All contaminated disposable equipment and polyethylene will be containerized and disposed of properly.

11.0 AIR MONITORING

Air monitoring will be done in active work areas to ensure that contaminant levels are not posing a hazard and to check the adequacy of PPE. Monitoring will be done as indicated below.

11.1 Direct read monitoring

Substance	Action Level	Action	Instrument
Organic vapors	>2 ppm, ≤20 ppm*	Wear APR with full face piece.	PID
	>20 ppm*	Wear supplied air respirator with full face piece.	PID
Combustible Vapors	>10% of LEL	Ventilate area to reduce level before entry. If condition arises during work, exit area and ventilate before re-entry,	Combustible gas monitor
Carbon Monoxide	20 ppm*	Ventilate to reduce level. If unable to keep levels below 20 ppm, wear supplied air respirator with full face piece.	Carbon monoxide meter

Sustained reading on PID for 5 minutes.

11.2 Schedule

Substance	Location	Frequency	Other
Organic vapors	All Work Areas	Initial/twice daily in storage area/twice daily in drum testing area/	Work area after spill, release, or unusual event, prior to restart of normal activities
	Perimeter-downwind	Continuous	
Combustible Vapors	All Work Areas	Initial/twice daily in storage area/twice daily in drum testing area/	Work area after spill, release or unusual even, prior to restart of normal activities
Carbon Monoxide	Forklift operating areas	Twice daily while forklift is operating	-

11.3 Instrumentation

Safety-Kleen will use the following monitoring equipment on site:

Instrument

Compounds/Atmospheres monitored

PID

Organic vapors

Lumidor MPU-16 multi-

Oxygen levels/combustible vapors/carbon

gas detector

monoxide

All monitoring results will be recorded and be available to site personnel at all times. All monitors will be calibrated and maintained per manufacturers specifications. Calibrations will be recorded and documented using the monitoring form in Attachment 2. All monitoring results will be made available to site personnel.

12.0 SITE SAFETY

12.1 Electrical

All electrical installations will comply with State Code, National Electrical Code (NEC) and United States Coast Guard Regulations. All electrical wiring and equipment will be of a type listed by UL, or Factory Mutual Engineering Corporation for the specific application and be rated for hazardous locations specific to the hazardous atmosphere present. Portable generators and welding machines will be grounded. Extension cords will be the hard usage type or better, and will contain the number of conductors required for the service plug and equipment ground wire.

All electrical equipment will be connected to a Ground Fault Circuit Interrupter (GFCI). All electrical tools (except double insulated), fuse boxes, and other equipment with conducting surfaces that could be energized, will be grounded.

12.2 Hand and Power Tools

All hand tools will be kept in good repair and used only for the purpose for which designed. Tools having defects that will impair their strength or render them unsafe for use will be removed from service. Power tools will be inspected, tested and determined to be in safe operating condition and properly maintained.

12.3 Safety Meetings

All Safety-Kleen personnel and sub-contractors on site will attend a pre-job safety meeting prior to the start of activities. Workers will be informed of the contents of this HASP, anticipated site hazards, methods of protection, PPE selected, site monitoring schedule and decontamination procedures. Any new SK employees or sub-contractors that arrive on site will attend this safety meeting before they begin their assigned duties. Attendance of this preassignment meeting will be documented using the attendance sheet in Attachment 5.

On-site personnel will meet daily and on a "significant conditions" basis to discuss safety matters, appropriate personal protection, and site conditions related to safety. A Safety-Kleen "Job Safety Briefing Form " will be used to conduct the daily safety meetings, which will be signed by the attendees. Local emergency response agencies (e.g., fire department, police) will also be briefed, as appropriate, prior to and, if required, during remediation. All on-site Safety-Kleen and subcontractor personnel will receive site-specific safety training before work begins. All safety meeting documentation will be kept on file on site.

12.4 Warning Signs and Signaling

Sign indicating entry by authorized personnel only will be posted at entry points to the exclusion zones. Warning signs will be placed to provide adequate warning of hazards to employees and the public. Signs will be removed or covered when hazards no longer exist. Signal standards will be posted at the operator's position and such other points as necessary to inform those concerned. These signals will be reviewed at the weekly meetings.

12.5 Material Handling and Storage

Miscellaneous parts, tools and equipment will be stored in trailers, in suitable buildings or in designated staging areas. Stairways, passageways and access ways will be kept clear at all times.

Proper lifting and handling techniques will be used at all times to prevent injuries related to material handling. Mechanical assistance such as forklifts, freight dollies and pallet jacks will be utilized where available. See Attachment 8.

12.6 Drum and Container Handling

Drums will only be handled if necessary. Prior to site activities all workers will be informed of the known and potential hazards involved with drum handling. When opening or moving drums adequate amounts of spill equipment(e.g. sorbents, overpacks) will be located nearby.

Efforts will be made to avoid moving drums manually. Forklifts of sufficient load capacity will be used on site to move drums. All forklift operators will be trained in the use of such equipment and will carry a card indicating their qualifications. If drums are to be moved manually drum dollies will be employed. At times it will be necessary to move drums without mechanical assistance. In these cases, proper manual moving techniques will be used to minimize the risk of injury. Techniques will be reviewed with site personnel during the preassignment safety meeting. See Attachment 8.

12.7 Machinery, Mechanized and Heavy Equipment

Before any machinery or mechanized equipment is brought onto the project, it will be inspected by the Lead Site Operator.

Getting off or on equipment while it is in motion will be prohibited.

Machinery or equipment requiring an operator will not be permitted to run unattended.

Machinery will not be operated in a manner that will endanger persons or property, nor will the safe operating speeds or loads be exceeded.

A safe work perimeter will be established around heavy equipment for workers assisting in backhoe or trenching operations.

All travel surfaces for heavy equipment will be inspected prior to use to ensure that equipment can be supported and will be able to pass safely.

12.8 Motor Vehicles and Heavy Equipment

Every motor vehicle operator will possess a valid operators license. Vehicles used to transport personnel will be properly equipped with seats. All tools and equipment will be guarded, stowed, and secured when transported with personnel.

12.9 Pressurized Equipment and Systems

Pressurized equipment and systems will be inspected and performance tested. Pressure vessels will be equipped with safety valves set at no more than 10 percent over working pressure. Every air compressor will automatically cease operating prior to exceeding the maximum working pressure allowable in the system.

Cylinders will be protected from extremes of temperature, physical damage, and electric current. Cylinder valve caps will be in place when cylinders are in storage, in transit, and whenever the regulator is not in place. Compressed gas cylinders will be secured in an upright position at all times, except when being hoisted.

12.10 Lockout and Tag-out

Unexpected operation of power equipment that can be started by remote control may cause injuries to workers. Hazardous waste activities around such power equipment is unlikely; however, when remote control powered equipment is located at a work location in vicinity of workers, the control switch, lever or valve will be locked in the "off" position and tagged with an appropriate warning label.

All equipment will be de-energized before cleaning activities begin. De-energization will be done in conjunction with site personnel and will be verified by the Lead Project Operator. See Attachment 6 for Safety-Kleen Lock out/Tag out procedures.

12.11 Heat and Cold Stress

Heat stress can exist at hazardous waste work sites. Chemically resistant protective clothing prevents the evaporation of perspiration. The wearing of vapor barrier clothing greatly increases the potential for heat stress and heat-induced illness. A heat stress disorder can result if minerals and liquids are not adequately replaced, or if the body's cooling mechanism fails. Heat stress is a combination of environmental and physical work factors that can cause heat rash, heat cramps, heat exhaustion and heat stroke. It may be necessary to monitor workers at frequent intervals and to provide a work/rest regimen to ensure that heat stress disorders do not occur.

Environmental conditions may be monitored by determining dry bulb thermometer temperatures, a measurement of radiant heat, wet bulb temperatures, and corresponding relative humidities. Personal worker condition may be monitored by heart rate, oral temperature and body water loss.

Cold-related injuries may occur at a hazardous waste site during work at cold locations. Hypothermia, a decrease in body temperature, is more likely to occur when workers are wearing wet or damp PPE. The American Conference of Governmental Industrial Hygienists (ACGIH) has published Threshold Limit Values (TLVs) for cold stress that are intended to protect workers from hypothermia and cold injury. The TLV for cold stress will be used when appropriate to evaluate personal exposures to cold stress. Further information including treatment for workers suffering from heat cramps, heat exhaustion, heat stroke, frost bite or hypothermia is found in Attachment 9.

13.0 SITE CONTROL

13.1 Access and Egress

Access to the site shall be restricted by an appropriately marked boundary. A written log of all contractors, subcontractors, state and federal representatives, and visitors shall be kept by the Lead Site Operator or their designee. The contaminated area or the exclusion zone will be indicated by a fence, barrier tape or some other appropriate method. A Contamination Reduction Zone will be the transition area between a contaminated area and the clean area. Safe access and egress will be provided to all work areas. Accessways will be kept clear of operating or construction materials, or debris that would obstruct passages or cause a tripping hazard.

13.2 Site Security

Each visitor must adhere to the site control and safety guidelines established in this plan. Depending upon existing conditions and circumstances at the site, Safety-Kleen may secure the site with barriers. All personnel entering the work area must meet the training and medical requirements of 29 CFR 1910.120. This shall be satisfied by presenting certificates documentation to the appropriate Safety-Kleen personnel prior to entry into the exclusion or CRZ.

13.3 Site Plan and Designated Control Zones

Exclusion zones, CRZ and support zones will be established on site as indicated below, If necessary, barriers such as hazard tape or fences, will be employed to identify and separate these zones. Entrance into and out of the exclusion zone will be limited to the CRZ. These zones will be changed as necessary as activities proceed and hazards are reassessed. Employees will be informed of these changes.

13.3.1 Exclusion Zone

Exclusion zones will be any areas where primary site activities occur. The extent of these areas will be determined by the Lead Site Operator or the Site Safety Officer and will take into consideration such things as building configurations, structural integrity and location on site. All workers entering the exclusion zone will wear the PPE designated for the tasks being performed.

13.3.2 Contamination Reduction Zone

The CRZ will be set up adjacent to exclusion zones and will be the location for decontamination upon leaving the exclusion zone. All traffic to and from the exclusion zone will be through the CRZ. Heavy equipment decontamination zone may be set up away from personnel decontamination zones as deemed necessary.

13.3.3 Support Zone

The support zone will be an uncontaminated area away from the exclusion zones. No contaminated equipment will be allowed in this zone. This area will contain wash facilities for workers, staging and storage areas, field offices.



14.0 RESPIRATORY PROTECTION PROGRAM

Safety-Kleen's Respiratory Protection Program is in accordance with OSHA 29 CFR 1910.134. The program is maintained at Safety-Kleen offices. All Safety-Kleen personnel entering the site shall be trained in the proper selection, use and limitations of air purifying respiratory protective devices. A facial hair policy has been instituted in accordance with 1910.134(5)(e)(i). All Safety-Kleen personnel entering the site shall be fit tested. All Safety-Kleen personnel required to use atmosphere supplied devices such as airlines, respirators, and self-contained breathing devices shall be properly trained in their use and limitations. All respiratory protective devices shall be inspected and stored in accordance with OSHA 1910.134 requirements. All respiratory protective devices worn shall be cleaned, and sanitized once per day, and more often as needed, in accordance with OSHA 1910.134 requirements.

15.0 NOISE CONTROL AND HEARING CONSERVATION

Whenever employees are subjected to noise levels exceeding the OSHA Action Level (85 DBA), engineering controls will be investigated. If engineering control methods are not feasible or practical, hearing protection will be provided and used. The Safety-Kleen Hearing Conservation Program is in accordance with 29 CFR 1910.95.

16.0 SANITATION/ DECONTAMINATION

An adequate supply of drinking water will be obtained from a source approved by local health authorities. Drinking water will be dispensed from clearly marked containers by means which prevent contamination. Paper cups dispensed from a sanitary container and a waste receptacle for used cups will be provided.

Portable toilet facilities will be provided. Toilets will be cleaned regularly by a commercial septic tank service. Hand washing facilities will be provided in the clean zone. Personal and equipment decontamination procedures are addressed in Section 10.0.

17.0 MEDICAL AND FIRST AID FACILITIES

Arrangements for medical personnel, medical facilities, and ambulance service will be made for all projects. Emergency medical phone numbers and directions to the hospital will be posted on site. An industrial first-aid kit will be provided and stored in a clean, weatherproof container. Emergency eyewash stations will be located at convenient locations at the work site. At least one employee in each work party will hold a current certificate in first aid training from the American Red Cross. If needed, snake bite kits, insect repellents and protective ointments for treatment of skin areas affected by poisonous plants will be provided in adequate quantities.

18.0 ACCIDENT REPORTING AND RECORDKEEPING

All accidents will be reported, investigated, and analyzed by the Lead Site Operator. All incidents will be reported to the Maverick Project Manager immediately. Any serious injury to personnel, fires or explosions, will be reported to the appropriate emergency agencies. Fatalities and/or hospitalization of 3 or more employees will be reported to the regional OSHA office within 8 hours.

A Safety-Kleen "Supervisors Report of Injury" form will be completed for all accidents on site. A copy of this form will be maintained on site. Copies will be forwarded to the appropriate parties as mandated by Safety-Kleen. A copy of the injury report form can be found in Attachment 4.

19.0 EMERGENCY AND CONTINGENCY PLAN

This section describes the contingencies and emergency planning procedures to be implemented at the site. The primary goal in designing the site operational procedures, strategies, and work plan are to minimize the potential for introduction of hazardous waste constituents to the air, soil, or water. This plan is designed for SK operations only and is superseded at all times by Maverick and/or EPA site emergency procedures.

19.1 Pre-Emergency Planning

Before on-site operations begin, Safety-Kleen personnel will be trained in the contents of the Emergency and Contingency Plan and the procedures established for the site. Topics to be addressed will include, but will not be limited to, emergency telephone numbers, specific response actions for on-the-scene personnel, emergency coordinators, employee training, implementation and evacuation plans. Emergency numbers for fire, rescue, police, and hospital will be posted in a conspicuous location.

The Emergency and Contingency Plan will be reviewed and revised if necessary, on a regular basis by the Lead Site Operator. This will ensure that the plan is adequate and consistent with prevailing site conditions.

19.2 Personnel Roles and Lines of Authority

The Lead Site Operator in the Safety-Kleen work area has primary responsibility for responding to and correcting emergency situations. This includes taking appropriate measures to ensure the safety of site personnel and the public. Possible actions may involve evacuation of personnel from the work area. The Lead Site Operator is also responsible for ensuring that corrective measures have been implemented, appropriate persons are notified and that follow up reports are completed. The Lead Site Operator will decide if evacuation of site personnel or adjacent residents is required.

Refer to Section 5.0 for on site organization.

19.3 Emergency Recognition and Prevention

Site hazards are listed in Section 8.0 of this plan. Additional hazards as a direct result of site activities, fire or explosion, spill or release, are discussed below along with prevention and control techniques. Personnel will be familiar with hazard recognition techniques from preassignment training and daily safety briefings. The SSO is responsible for ensuring that prevention devises or equipment are available.

19.4 Evacuation Procedures

The following procedures will be followed in the event that site evacuation becomes necessary:

Evacuations, due to SK activities, will be indicated by radio to the work areas or by a ten second blast of the air horn. All personnel should evacuate upwind of any activities. Workers will proceed to the designated assembly area. Workers will be informed. evacuation procedures before work begins.

If evacuation becomes necessary, the Lead Site Operator and/or Safety Officer will determine the direction of evacuation based on wind direction, ease of access, and the location of the incident. He will communicate his decision to site employees by radio and/or hand signals. Workers will be expected to proceed to the nearest safe exit with their buddy and proceed to the predetermined safe distance place. Workers will remain in that area until notification is given that re-entry is safe.

19.5 Evacuation routes and Safe Distances

If workers are told to evacuate the site they will proceed to the nearest perimeter gate. Site maps indicating these gates will be given to all employees at the preassignment safety meeting and reviewed at the daily safety briefings

Safe distance from site are:

If workers are notified of an emergency regarding other site operations they will be required to stop remediation activities and proceed as directed in the pre-work safety briefing or by Maverick personnel.

For emergencies regarding Laidlaw operations, workers will be instructed as to safe distances as the work areas change.

19.6 Communications

The following methods of communication will be used on-site:

19.6.1 Routine communications:

Routine communications will be done by voice, radio or hand signals as work activities require.

19.6.2 Emergency Communications:

Emergency communications will be done using radios, air horns, voice or hand signals depending on the nature of the emergency. Workers will be instructed as to the meaning of site alarm systems and air horn signals before work begins.

19.7 Medical Emergencies

In the case of personal injury on site, the injured person will be decontaminated and rendered first aid until professional help arrives or until the injured person can be transported to the hospital. In the case of a life threatening emergency, decontamination will be conducted only to the extent necessary to provide medical attention, or as directed by emergency medical personnel. If minimal contamination is done in the case of an emergency, steps should be taken to minimize the transfer of contaminants to medical personnel or transport vehicles. Decontamination of medical personnel and equipment will be conducted as necessary.

Any persons transported to the hospital for treatment will take with them information on the chemicals they have been exposed to on site.

19.8 Spill or Release of Material

In the event of a spill or release site personnel will take the following steps:

- Inform the supervisor or LPO immediately,
- the supervisor or LPO will notify Maverick personnel immediately,
- Identify material and don appropriate PPE,
- Locate the source of the spillage and stop the flow if it can be done safely,
- Contain and clean up material and absorbents, overpack containers as needed.

Spills will require activities in the immediate work area to cease until clean-up is completed but may not affect other work areas on site. Supervisors will inform the Lead Site Operator as to the extent of the problem and a decision will be made whether to stop work in other areas or to evacuate site. The Lead Site Operators decision will be based on the following:

- Type and volume of material spilled or released,
- danger of fire or explosion,
- number of workers required to mitigate the spill of release.

Measures to prevent and control spills and releases will include proper container handling procedures, sufficient quantities of sorbent materials, established evacuation routes and alarm signals.

19.9 Fire or explosion

In the event of a fire, that cannot be extinguished by site personnel, or explosion, the local fire department and Maverick representative will be notified immediately. Upon their arrival, the Lead Site Operator will advise the fire commander of the location, nature, and identification of the hazardous materials on site. If it is safe to do so, site personnel may:

- Use fire fighting equipment available on site to control or extinguish the fire, and
- Remove or isolate flammable or other materials which may contribute to the fire.



Measures to prevent and control fires and explosions include fire extinguishers, alarm systems and site inspections. Further information on fire safety is found in Section 20.0.

19.10 On Site Emergency Equipment

- First Aid Kits
- Multi purpose dry chemical fire extinguishers
- Emergency SCBAs
- Spill absorbent and clean up equipment
- Eye Wash stations
- Overpacks
- Site telephone
- Air horns

All equipment will be inspected weekly by Lead Site Operator or designee.

20.0 FIRE SAFETY PROCEDURES

All Safety-Kleen personnel are instructed in basic fire safety including the use of hand held fire extinguishers. Emphasis is placed on detecting a fire, alerting other personnel with a predetermined alarm, and notifying local fire departments. This information shall be reviewed at morning meetings, as necessary.

In the event of fire, it is imperative to prevent its spread. Most fires can be easily extinguished if discovered quickly. If possible, the fire will be extinguished by site personnel. Safety-Kleen personnel discovering a fire shall use a radio/horn or other means to alert others.

Fire extinguishers to be used at the site are carbon dioxide, halon or dry chemical. Fire extinguishers shall be located at all active work locations and on or near all heavy equipment. Inspection of available portable fire extinguishers will be the responsibility of the Lead Site Operator (or designee). Inspections will be conducted weekly.

20.1 Chemical Fire Hazards

The National Fire Protection Association Standard No. 30, "Flammable and Combustible Liquids Code," and Safety-Kleen Health and Safety Procedure SAF-20-0 " Flammable Materials Handling Procedure" address the hazards of flammable liquids. Flammable liquid hazards may be present at hazardous waste sites. No open flame safety rules will be enforced at all work locations. Compatibility testing of unknown substances will be done when necessary to prevent the inadvertent mixing of incompatible substances that could cause a fire.

20.2 Grounding and Bonding

Static electricity generated during the transfer of a fluid into a tank may create a potential fire hazard. Bonding and grounding of containers will be provided when flammable liquids are poured from one container to another.

21.0 MEDICAL MONITORING

All Safety-Kleen employees on site have participated in a medical monitoring program in compliance with 29 CFR 1910.120, 29 CFR 1910.134, 29 CFR 1910..95 and other applicable standards.

22.0 TRAINING

All Safety-Kleen employees on site have received OSHA 40 hour training and annual 8 hour updates for site workers. Supervisory personnel have received OSHA 8 hour supervisor training in compliance with 29 CFR 1910.120 (e).

23.0 WASTE DISPOSAL

Safety-Kleen is very cautious in selecting any facility for treatment or disposal of wastes, and conducts facility audits prior to using any facility. These audits are periodically performed to ensure continued performance with Safety-Kleen's strict standards. All waste disposal will have the prior approval of Solutia and the USEPA.

24.0 REFERENCES

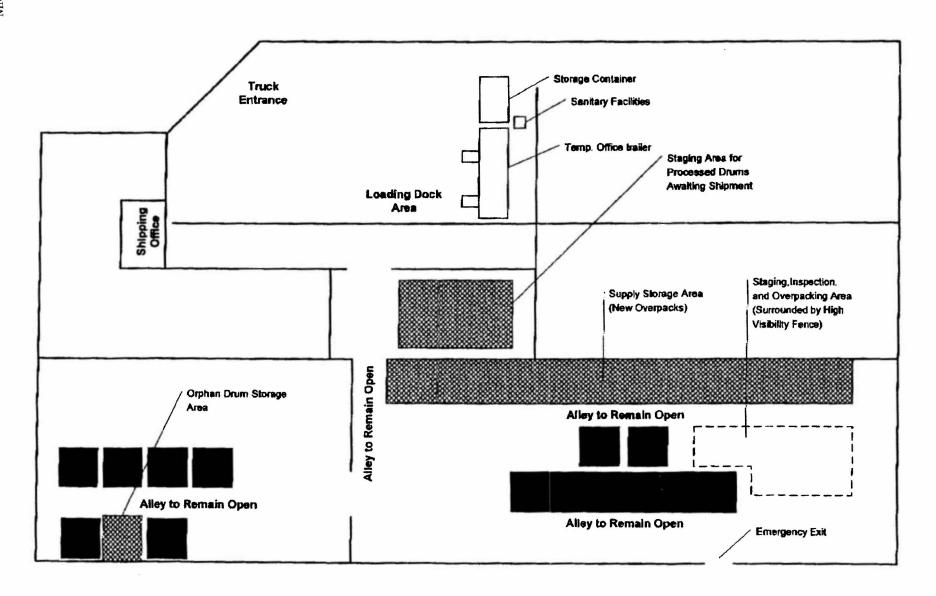
- 1. Code of Federal Regulations, Title 29, Parts 1910 (1910.1 to end)
- 2. Occupational Safety and Health Reference Manual for Hazardous Waste Site Activities, 1985, NIOSH/OSHA/USCG/EPA.

25.0 ATTACHMENTS

- 1. Site Maps
- 2. Material Safety Data Sheets
- 3. Air Monitoring Report Form
- 4. Supervisors First Report of Injury Form
- 5. HASP Training Documentation Form
- 6. Lock out/Tag out
- 7. Job Safety Briefing Form
- 8. Manual Material Handling
- 9. Thermal Extremes

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Morgan Materials Site Plan



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MMS - 2.8029

MONSANTO -- GELVA MULTIPOLYMER RESIN SOLUTION 2393 - POLYMER RESIN, SOLUTION

MATERIAL SAFETY DATA SHEET

NSN: 804000D002989

Manufacturer's CAGE: 76541

Part No. Indicator: A

Part Number/Trade Name: GELVA MULTIPOLYMER RESIN SOLUTION 2393

General Information

Item Name: POLYMER RESIN, SOLUTION

Company's Name: MONSANTO CO

Company's Street: 800 N LINDBERGH BLVD

Company's City: ST LOUIS Company's State: MO Company's Country: US Company's Zip Code: 63167

Company's Emerg Ph #: 314-694-6661, CHEMTREC 800-424-9300

Company's Info Ph #: 314-694-6661 Record No. For Safety Entry: 001 Tot Safety Entries This Stk#: 001

Status: SE

Date MSDS Prepared: 23FEB93 Safety Data Review Date: 02APR93

Supply Item Manager: CX

MSDS Preparer's Name: ANNE D. DIPPLE

MSDS Serial Number: BQDXZ Hazard Characteristic Code: F3

Unit Of Issue: NK

Ingredients/Identity Information

Proprietary: NO

Ingredient: VINYL ACETATE-ACRYLATE MULTIPOLYMER

Ingredient Sequence Number: 01

Percent: 41.5-45

NIOSH (RTECS) Number: 1004968VP

CAS Number: 26634-78-6
OSHA PEL: NOT ESTABLISHED
ACGIH TLV: NOT ESTABLISHED

Other Recommended Limit: 20 PPM VINYL ACETATE

Proprietary: NO

Ingredient: VINYL ACETATE (SARA III)

Ingredient Sequence Number: 02

Percent: 1

NIOSH (RTECS) Number: AK0875000

CAS Number: 108-05-4 OSHA PEL: 10 PPM/15 STEL

ACGIH TLV: 10 PPM/15,A3 STEL;93
Other Recommended Limit: 20 PPM STEL

Proprietary: NO

Ingredient: TOLUENE (SARA III)
Ingredient Sequence Number: 03

Percent: 42

NIOSH (RTECS) Number: XS5250000

CAS Number: 108-88-3 OSHA PEL: 200 PPM/150 STEL ACGIH TLV: 50 PPM; 9293

Other Recommended Limit: NONE RECOMMENDED

Proprietary: NO

Ingredient: N-HEPTANE

1S - 2.8030

gredient Sequence Number: 04

Percent: 12

NIOSH (RTECS) Number: MI7700000

CAS Number: 142-82-5
OSHA PEL: 500 PPM/500 STEL
ACGIH TLV: 400 PPM/500STEL;9293

Other Recommended Limit: NONE RECOMMENDED

Proprietary: NO

Ingredient: ETHYL ALCOHOL (ETHANOL)

Ingredient Sequence Number: 05

Percent: 1

NIOSH (RTECS) Number: KQ6300000

CAS Number: 64-17-5 OSHA PEL: 1000 PPM

ACGIH TLV: 1000 PPM; 9293

Other Recommended Limit: NONE RECOMMENDED

Physical/Chemical Characteristics

Appearance And Odor: VISCOUS SOLUTION, HYDROCARBON ODOR.

Specific Gravity: 0.91

Decomposition Temperature: UNKNOWN Solubility In Water: NEGLIGIBLE Percent Volatiles By Volume: >58

Viscosity: VISCOUS

Corrosion Rate (IPY): UNKNOWN

Fire and Explosion Hazard Data

Flash Point: 27.0F,-2.8C Flash Point Method: CC

Extinguishing Media: USE WATER FOG, CARBON DIOXIDE, FOAM, OR DRY CHEMICAL. Special Fire Fighting Proc: WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND A FULL FACED SELF CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER SPRAY.

Unusual Fire And Expl Hazrds: CLOSED CONTAINERS MAY EXPLODE. COMBUSTION OR HEAT OF FIRE MAY PRODUCE HAZARDOUS DECOMPOSITION PRODUCTS AND VAPORS.

Reactivity Data

Stability: YES

Cond To Avoid (Stability): HIGH HEAT, OPEN FLAMES AND OTHER SOURCES OF

IGNITION

Materials To Avoid: STRONG OXIDIZING AGENTS

Hazardous Decomp Products: ACETIC ACID, CARBON MONOXIDE, CARBON DIOXIDE

AND OTHER HYDROCARBON COMPOUNDS DURING COMBUSTION.

Hazardous Poly Occur: NO

Conditions To Avoid (Poly): NOT APPLICABLE

Health Hazard Data

LD50-LC50 Mixture: ORAL LD50 (RAT) IS UNKNOWN

Route Of Entry - Inhalation: YES

Route Of Entry - Skin: YES

Route Of Entry - Ingestion: YES

IRRITATION TO THE RESPIRATORY TRACT, DIZZINESS, HEADACHE, UNCONSCIOUSNESS. INGESTION: INTESTINAL DISORDERS, NAUSEA, VOMITING, ASPIRATION INTO LUNGS MAY CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL. CHRONIC-DERMATITS, LIVER

AND KIDNEY DAMAGE.

Carcinogenicity - NTP: NO Carcinogenicity - IARC: NO Carcinogenicity - OSHA: NO

Explanation Carcinogenicity: THE COMPONENTS OF THIS PRODUCT HAVE NOT SHOWN

MMS - 2.8031

ANY EVIDENCE OF BEING CARCINOGENIC.

Signs/Symptoms Of Overexp: OVEREXPOSURE MAY LEAD TO RESPIRATORY IRRITATION, NAUSEA, FATIGUE, DIZZINESS, HEADACHES, UNCONSCIOUSNESS, DERMATITIS AND EYE IRRITATION.

Med Cond Aggravated By Exp: PERSONS WITH SKIN AND LUNG DISORDER SHOULD USE CAUTION WHEN HANDLING OR USING THIS PRODUCT.

Emergency/First Aid Proc: SKIN: REMOVE CONTAMINATED CLOTHING. WASH WITH REMOVE TO FRESH AIR & RESTORE BREATHING IF NECESSARY. GET MEDICAL ATTENTION. EYE: IMMEDIATELY FLUSH WITH WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION. INGESTION: GET IMMEDIATE MEDICAL ATTENTION. DO NOT INDUCE VOMITING. NOTHING BY MOUTH IF UNCONSCIOUS.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: MINOR: ABSORB MATERIAL WITH CLAY, VERMICULITE, OR SIMILAR ABSORBENT MATERIAL. PLACE IN DISPOSAL CONTAINERS. MAJOR: DIKE & CONTAIN SPILL. ELIMINATE SOURCES OF IGNITION. SHUT OFF LEAKS. REMOVE LIQUID BY VACUUM OR ABSORBENT.

Neutralizing Agent: NOT APPLICABLE

Waste Disposal Method: WASTE MAY BE BURNED IN AN APPROVED INCINERATOR OR DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS.

Precautions-Handling/Storing: STORE IN A COOL, VENTILATED WORK AREA. KEEP CONTAINERS CLOSED WHEN NOT IN USE. COMBUSTIBLE LIQUID; EMPTY CONTAINERS CAN BE HAZARDOUS.

Other Precautions: EMPTY CONTAINERS RETAIN RESIDUE. DO NOT PRESSURIZE, CUT, WELD OR EXPOSE TO HEAT, FLAME, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY.

Control Measures

Respiratory Protection: USE NIOSH APPROVED RESPIRATOR. AIR-SUPPLIED OR FILTERING TYPE WITH ORGANIC VAPOR CARTRIDGES ARE RECOMMENDED.

Ventilation: LOCAL AND MECHANICAL EXHAUST RECOMMENDED. AVOID OPEN ELECTRICAL SOURCES NEAR PRODUCT VAPOR AREAS.

Protective Gloves: NEOPRENE, NITRILE, OR POLYVINYL ALCOHOL Eye Protection: USE CHEMICAL SAFETY GOGGLES & FACESHIELD Other Protective Equipment: EYE WASH STATION & SAFETY SHOWER.

Work Hygienic Practices: DO NOT TAKE INTERNALLY. AVOID SKIN CONTACT. WASH SKIN AFTER USING PRODUCT. DO NOT EAT, DRINK OR SMOKE IN WORK AREA. Suppl. Safety & Health Data: NONE

Transportation Data

Trans Data Review Date: 93092

DOT PSN Code: MQQ

DOT Proper Shipping Name: RESIN SOLUTION

DOT Class: 3

DOT ID Number: UN1866 DOT Pack Group: II

DOT Label: FLAMMABLE LIQUID

IMO PSN Code: NBF

IMO Proper Shipping Name: RESIN, SOLUTION

IMO Regulations Page Number: 3278

IMO UN Number: 1866
IMO UN Class: I/II ++

IMO Subsidiary Risk Label: -

IATA PSN Code: VRV

IATA UN ID Number: 1866

IATA Proper Shipping Name: RESIN SOLUTION

IATA UN Class: 3

IATA Label: FLAMMABLE LIQUID

AFI PSN Code: VRV

AFI Prop. Shipping Name: RESIN SOLUTION

AFI Class: 3

AFI ID Number: UN1866 AFI Pack Group: II AFI Basic Pac Ref: 7-7

Disposal Data

Label Data

Label Required: YES

Technical Review Date: 02APR93

Label Status: F

Common Name: GELVA MULTIPOLYMER RESIN SOLUTION 2393

Chronic Hazard: YES Signal Word: DANGER!

Acute Health Hazard-Moderate: X

Contact Hazard-Moderate: X

Fire Hazard-Severe: X
Reactivity Hazard-None: X

Special Hazard Precautions: WARNING! FLAMMABLE LIQUID AND VAPOR, CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. INGESTION MAY BE HARMFUL. ASPIRATION INTO LUNGS MAY CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL. STORE IN A COOL, VENTILATED WORK AREA. FIRST AID-SKIN:SCRAPR MATERIAL, WASH WITH SOAP AND WATER. GET MEDICAL ATTENTION IF IRRITATION PERSISTS. INHALATION: REMOVE TO FRESH AIR & RESTORE BREATHING IF NECESSARY. GET MEDICAL ATTENTION. EYE:IMMEDIATELY FLUSH WITH WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION. INGESTION: GET IMMEDIATE MEDICAL ATTENTION. DO NOT INDUCE VOMITING.

Protect Eye: Y Protect Skin: Y

Protect Respiratory: Y Label Name: MONSANTO CO

Label Street: 800 N LINDBERGH BLVD

Label City: ST LOUIS Label State: MO Label Zip Code: 63167 Label Country: US

Label Emergency Number: 314-694-6661, CHEMTREC 800-424-9300



Genium Publishing Corporation

One Genium Plaza Schenectady, NY 12304-4690 USA (518) 377-8854

| Material Safety Data Sheets Collection:

Sheet No. 467 Automotive Gasoline, Lead-free MMS - 2.8033

Issued: 10/81

Revision: A, 9/91

Section 1. Material Identification

Automotive Gasoline, Lead-free, Description: A mixture of volatile hydrocarbons composed mainly of branched-chain paraffins, cycloparaffins, olefins, naphthenes, and aromatics. In general, gasoline is produced from petroleum, shale oil, Athabasca tar sands, and coal. Motor gasolines are made chiefly by cracking processes, which convert heavier petroleum fractions into more volatile fractions by thermal or catalytic decomposition. Widely used as fuel in internal combustion engines of the spark-ignited, reciprocating type. Automotive gasoline has an octane number of approximately 90. A high content of aromatic hydrocarbons and a consequent high toxicity are also associated with a high octane rating. Some gasolines sold in the US contain a minor proportion of tetraethyllead, which is added in concentrations not exceeding 3 ml per gallon to prevent engine "knock." However, methyl-tert-butyl ether (MTBE) has almost completely replaced tetraethyllead.

Other Designations: CAS No. 8006-61-9, benzin, gasoline, gasolene, motor spirits, natural gasoline, petrol.

Manufacturer: Contact your supplier or distributor. Consult latest Chemical Week Buyers' Guide⁽⁷³⁾ for a suppliers list.

35
R 1 NFPA
I 2
S 2*
K 4
* Skin absorption
HMIS
H 2
F 3
R 1
PPG†
† Sec. 8

Cautions: Inhalation of automotive gasoline vapors can cause intense burning in throat and lungs, central nervous system (CNS) depression, and possible fatal pulmonary edema. Gasoline is a dangerous fire and explosion hazard when exposed to heat and flames.

Section 2. Ingredients and Occupational Exposure Limits

Automotive gasoline, lead-free*

1990 OSHA PELs

8-hr TWA: 300 ppm, 900 mg/m³ 15-min STEL: 500 ppm, 1500 mg/m³ 1990-91 ACGIH TLVs

TWA: 300 ppm, 890 mg/m³ STEL: 500 ppm, 1480 mg/m³

1990 NIOSH REL

None established

1985-86 Toxicity Data*

Man, inhalation, TC_{Lo}: 900 ppm/1 hr; toxic effects include sense organs and special senses (conjunctiva irritation), behavioral (hallucinations, distorted perceptions), lungs, thorax, or respiration (cough)

Human, eye: 140 ppm/8 hr; toxic effects include mild irritation Rat, inhalation, LC_{so} : 300 g/m³/5 min

* A typical modern gasoline composition is 80% paraffins, 14% aromatics, and 6% olefins. The mean benzene content is approximately 1%. Other additives include sulfur, phosphorus, and MTBE.

† See NIOSH, RTECS (LX3300000), for additional toxicity data.

Section 3. Physical Data

Boiling Point: Initially, 102 °F (39 °C); after 10% distilled, 140 °F (60 °C); after 50% distilled, 230 °F (110 °C); after 90% distilled, 338 °F (170 °C); final boiling point, 399 °F (204 °C)

Density/Specific Gravity: 0.72 to 0.76 at 60 °F (15.6 °C)

Water Solubility: Insoluble

Vapor Density (air = 1): 3.0 to 4.0

Appearance and Odor: A clear (gasoline may be colored with dye), mobile liquid with a characteristic odor recognizable at about 10 ppm in air.

Section 4. Fire and Explosion Data

Flash Point: -45 °F (-43 °C) Autoignition Temperature: 536 to 853 °F (280 to 456 °C) LEL: 1.3% v/v

UEL: 6.0% v/v

Extinguishing Media: Use dry chemical, carbon dioxide, or alcohol foam as extinguishing media. Use of water may be ineffective to extinguish fire, but use water spray to knock down vapors and to cool fire-exposed drums and tanks to prevent pressure rupture. Do not use a solid stream of water since it may spread the fuel.

Unusual Fire or Explosion Hazards: Automobile gasoline is an OSHA Class IB flammable liquid and a dangerous fire and explosion hazard when exposed to heat and flames. Vapors can flow to an ignition source and flash back. Automobile gasoline can also react violently with oxidizing agents.

Special Fire-fighting Procedures: Isolate hazard area and deny entry. Since fire may produce toxic fumes, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode, and full protective clothing. When the fire is extinguished, use nonsparking tools for cleanup. Be aware of runoff from fire control methods. Do not release to sewers or waterways.

Section 5. Reactivity Data

Stability/Polymerization: Automotive gasoline is stable at room temperature in closed containers under normal storage and handling conditions. Hazardous polymerization cannot occur.

Chemical Incompatibilities: Automotive gasoline can react with oxidizing materials such as peroxides, nitric acid, and perchlorates. Conditions to Avoid: Avoid heat and ignition sources.

Hazardous Products of Decomposition: Thermal oxidative decomposition of automotive gasoline can produce oxides of carbon and partially oxidized hydrocarbons.

on 6. Health Hazard Data

Carcinogenicity: In 1990 reports, the IARC list gasoline as a possible human carcinogen (Group 2B). Although the IARC has assigned an overall evaluation to gasoline, it has not assigned an overall evaluation to specific substances within this group (inadequate human evidence). Summary of Risks: Gasoline vapors are considered moderately poisonous. Vapor inhalation can cause central nervous system (CNS) depression and mucous membrane and respiratory tract irritation. Brief inhalations of high concentrations can cause a fatal pulmonary edema. Reported responses to gasoline vapor concentrations are: 160 to 270 ppm causes eye and throat irritation in several hours; 500 to 900 ppm causes eye, nose, and throat irritation, and dizziness in 1 hr; and 2000 ppm produces mild anesthesia in 30 min. Higher concentrations are intoxicating in 4 to 10 minutes. If large areas of skin are exposed to gasoline, toxic amounts may be absorbed. Repeated or prolonged skin exposure causes dermatitis. Certain individuals may develop hypersensitivity. Ingestion can cause CNS depression. Pulmonary aspiration after ingestion can cause severe pneumonitis. In adults, ingestion of 20 to 50 g gasoline may produce severe symptoms of poisoning.

Medical Conditions Aggravated by Long-Term Exposure: None reported.

Target Organs: Skin, eye, respiratory and central nervous systems.

Target Organs: Skin, eye, respiratory and central nervous systems.

Primary Entry Routes: Inhalation, ingestion, skin contact.

Acute Effects: Acute inhalation produces intense nose, throat, and lung irritation; headaches; blurred vision; conjunctivitis; flushing of the face; mental confusion; staggering gait; slurred speech; and unconsciousness, sometimes with convulsions. Ingestion causes inebriation (drunkenness), vomiting, dizziness, fever, drowsiness, confusion, and cyanosis (a blue to dark purplish coloration of skin and mucous membrane caused by lack of oxygen). Aspiration causes choking, cough, shortness of breath, increased rate of respiration, excessively rapid heartbeat, fever, bronchitis, and pneumonitis. Other symptoms following acute exposure include acute hemorrhage of the pancreas, fatty degeneration of the liver and kidneys, and passive congestion of spleen.

Chronic Effects: Chronic inhalation results in appetite loss, nausea, weight loss, insomnia, and unusual sensitivity (hyperesthesia) of the distal extremities followed by motor weakness, muscular degeneration, and diminished tendon reflexes and coordination. Repeated skin exposure can

cause blistering, drying, and lesions.

FIRST AID

Eyes: Gently lift the eyelids and flush immediately and continuously with flooding amounts of water until transported to an emergency medical

facility. Consult a physician immediately.

Skin: Quickly remove contaminated clothing. Rinse with flooding amounts of water for at least 15 min. For reddened or blistered skin, consult a physician. Wash affected area with soap and water.

Inhalation: Remove exposed person to fresh air and support breathing as needed.

Ingestion: Never give anything by mouth to an unconscious or convulsing person. If ingested, do not induce vomiting due to aspiration hazard. Give conscious victim a mixture of 2 tablespoons of activated charcoal mixed in 8 oz of water to drink. Consult a physician immediately. After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 7. Spill, Leak, and Disposal Procedures

Spill/Leak: Notify safety personnel, evacuate all unnecessary personnel, remove heat and ignition sources, and provide maximum explosion-proof ventilation. Cleanup personnel should protect against vapor inhalation and liquid contact. Use nonsparking tools. Take up small spills with sand or other noncombustible adsorbent. Dike storage areas to control leaks and spills. Follow applicable OSHA regulations (29 CFR 1910.120).

Aquatic Toxicity: Bluegill, freshwater, LC_{so}, 8 ppm/96 hr.

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

EPA Designations

RCRA Hazardous Waste (40 CFR 261.21): Characteristic of ignitability CERCLA Hazardous Substance (40 CFR 302.4): Not listed SARA Extremely Hazardous Substance (40 CFR 355): Not listed

SARA Toxic Chemical (40 CFR 372.65): Not listed

OSHA Designations

Listed as an Air Contaminant (29 CFR 1910.1000, Table Z-1-A)

Section 8. Special Protection Data

Goggles: Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Since contact lens use in industry is controversial, establish your own policy.

Respirator: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a NIOSH-approved respirator. There are no specific NIOSH recommendations. However, for vapor concentrations not immediately ately dangerous to life or health, use chemical cartridge respirator equipped with organic vapor cartridge(s), or a supplied-air respirator. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Other: Wear impervious gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Materials such as neoprene or polyvinyl alcohol provide excellent/good resistance for protective clothing. Note: Resistance of specific materials can vary from product to

product.

Ventilation: Provide general and local explosion-proof exhaust ventilation systems to maintain airborne concentrations below the OSHA PELs

Ventilation: Provide general and local explosion-proof exhaust ventilation systems to maintain airborne concentrations below the OSHA PELs (Sec. 2). Local exhaust ventilation is preferred since it prevents contaminant dispersion into the work area by controlling it at its source. (100) Safety Stations: Make available in the work area emergency eyewash stations, safety/quick-drench showers, and washing facilities. Contaminated Equipment: Remove this material from your shoes and equipment. Launder contaminated clothing before wearing. Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9. Special Precautions and Comments

Storage Requirements: Store in closed containers in a cool, dry, well-ventilated area away from heat and ignition sources and strong oxidizing agents. Protect containers from physical damage. Avoid direct sunlight. Storage must meet requirements of OSHA Class IB liquid. Outside or detached storage preferred.

Engineering Controls: Avoid vapor inhalation and skin or eye contact. Consider a respiratory protection program that includes regular training, maintenance, inspection, and evaluation. Indoor use of this material requires explosion-proof exhaust ventilation to remove vapors. Only use gasoline as a fuel source due to its volatility and flammable/explosive nature. Practice good personal hygiene and housekeeping procedures. Wear clean work clothing daily.

Transportation Data (49 CFR 172.101, .102)

DOT Shipping Name: Gasoline (including casing-head and natural)

DOT Hazard Class: Flammable liquid

ID No.: UN1203

DOT Label: Flammable liquid

DOT Packaging Exceptions: 173.118 DOT Packaging Requirements: 173.119

IMO Shipping Name: Gasoline IMO Hazard Class: 3.1

ID No.: UN1203

IMO Label: Flammable liquid IMDG Packaging Group: II

MSDS Collection References: 26, 73, 89, 100, 101, 103, 124, 126, 127, 132, 133, 136, 138, 140, 143, 146, 153, 159
Prepared by: M Allison, BS: Industrial Hygiene Review: DJ Wilson, CIH; Medical Review: W Silverman, MD; Edited by: JR Smart, MS



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Sheet No. 470 Diesel Fuel Oil No. 2-D

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MMS - 2.8035

Issued: 10/81

Revision: A. 11/90

Section I. Material Identification

Diesel Fuel Oil No. 2-D Description: Diesel fuel is obtained from the middle distillate in petroleum separation; a distillate R oil of low sulfur content. It is composed chiefly of unbranched paraffins. Diesel fuel is available in various grades, one of which is synonymous with fuel oil No. 2-D. This diesel fuel oil requires a minimum Cetane No. (efficiency rating for diesel fuel comparable to octane number ratings for gasoline) of 40 (ASTM D613). Used as a fuel for trucks, ships, and other automotive engines; as mosquito control (coating on breeding waters); and for drilling muds.

Other Designations: CAS No. 68334-30-5, diesel fuel.

Manufacturer: Contact your supplier or distributor. Consult the latest Chemicalweek Buyers' Guide(73) for a suppliers list.

Cautions: Diesel fuel oil No. 2-D is a skin irritant and central nervous depressant with high mist concentrations. It is an environmental hazard and moderate fire risk.

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* Sec. 8

Section 2. Ingredients and Occupational Exposure Limits

Diesel fuel oil No. 2-D*

1989 OSHA PEL

1990-91 ACGIH TLV

1988 NIOSH REL

1985-86 Toxicity Data‡

None established

Mineral Oil Mist TWA: 5 mg/m3+

STEL: 10 mg/m3

None established

Rat, oral, LD_{so}: 9 g/kg produces gastrointestinal (hypermotility, diarrhea)

* Diesel fuel No. 2-D tends to be low in aromatics and high in paraffinics. This fuel oil is complex mixture of: 1) >95% paraffinic, olefinic, naphthenic, and aromatic hydrocarbons, 2) sulfur (<0.5%), and 3) benzene (<100 ppm). [A low benzene level reduces carcinogenic risk. Fuel oils can be exempted under the benzene standard (29 CFR 1910.1028)]. Although low in the fuel itself, benzene concentrations are likely to be much higher in processing areas. † As sampled by nonvapor-collecting method.

Monitor NIOSH, RTECS (HZ1800000), for future toxicity data.

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Boiling Point Range: 340 to 675 °F (171 to 358 °C) Viscosity: 1.9 to 4.1 centistoke at 104 °F (40 °C)

Specific Gravity: <0.86 Water Solubility: Insoluble

Appearance and Odor: Brown, slightly viscous liquid.

Section 4.2 Fire and Explosion Data

Flash Point: 125 °F (52 °C) min.

Autoignition Temperature: >500 °F (932 °C) | LEL: 0.6% v/v

Extinguishing Media: Use dry chemical, carbon dioxide, or foam to fight fire. Use a water spray to cool fire exposed containers. Do not use a forced water spray directly on burning oil since this will scatter the fire. Use a smothering technique for extinguishing fire.

Unusual Fire or Explosion Hazards: Diesel fuel oil No. 2-D is a OSHA Class II combustible liquid. Its volatility is similar to that of gas oil. Vapors may travel to a source of ignition and flash back.

Special Fire-fighting Procedures: Isolate hazard area and deny entry. Since fire may produce toxic fumes, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in the pressure-demand or positive-pressure mode and full protective clothing. If feasible, remove containers from fire. Be aware of runoff from fire control methods. Do not release to sewers or waterways due to pollution and fire or explosion hazard.

Section 5. Reactivity Data

Stability/Polymerization: Diesel fuel oil No. 2-D is stable at room temperature in closed containers under normal storage and handling conditions. Hazardous polymerization cannot occur.

Chemical Incompatibilities: It is incompatible with strong oxidizing agents; heating greatly increases the fire hazard.

Conditions to Avoid: Avoid heat and ignition sources.

Hazardous Products of Decomposition: Thermal oxidative decomposition of diesel fuel oil No. 2-D can produce various hydrocarbons and hydrocarbon derivatives, and other partial oxidation products such as carbon dioxide, carbon monoxide, and sulfur dioxide.

ion 6. Health Hazard Data

Carcinogenicity: Although the IARC has not assigned an overall evaluation to diesel fuels as a group, it has evaluated occupational exposures in petroleum refining as an IARC probable human carcinogen (Group 2A). It has evaluated distillate (light) diesel oils as not classifiable as human

Summary of Risks: Although diesel fuel's toxicologic effects should resemble kerosine's, they are somewhat more pronounced due to additives such as sulfurized esters. Excessive inhalation of aerosol or mist can cause respiratory tract irritation, headache, dizziness, nausea, vomiting, and loss of coordination, depending on concentration and exposure time. When removed from exposure area, affected persons usually recover completely. If vomiting occurs after ingestion and if oil is aspirated into the lungs, hemorrhaging and pulmonary edema, progressing to renal involvement and chemical pneumonitis, may result. A comparative ratio of oral to aspirated lethal doses may be 1 pt vs. 5 ml. Aspiration may also result in transient CNS depression or excitement. Secondary effects may include hypoxia (insufficient oxygen in body cells), infection, pneumatocele formation, and chronic lung dysfunction. Inhalation may result in euphoria, cardiac dysrhythmias, respiratory arrest, and CNS toxicity Prolonged or repeated skin contact may irritate hair follicles and block sebaceous glands, producing a rash of acne pimples and spots, usually on arms and legs.

Medical Conditions Aggravated by Long-Term Exposure: None reported.

Target Organs: Central nervous system, skin, and mucous membranes.

Primary Entry Routes: Inhalation, ingestion.

Acute Effects: Systemic effects from ingestion include gastrointestinal irritation, vomiting, diarrhea, and in severe cases central nervous system depression, progressing to coma or death. Inhalation of aerosols or mists may result in increased rate of respiration, tachycardia (excessively rapid heart beat), and cyanosis (dark purplish discoloration of the skin and mucous membranes caused by deficient blood oxygenation).

Chronic Effects: Repeated contact with the skin causes dermatitis.

Eyes: Gently lift the eyelids and flush immediately and continuously with flooding amounts of water until transported to an emergency medical facility. Consult a physician immediately.

Skin: Quickly remove contaminated clothing. Rinse with flooding amounts of water for at least 15 min. If large areas of the body have been exposed or if irritation persists, get medical help immediately. Wash affected area with soap and water.

Inhalation: Remove exposed person to fresh air and support breathing as needed.

Ingestion: Never give anything by mouth to an unconscious or convulsing person. If ingested, do not induce vomiting due to aspiration hazard. Contact a physician immediately. Position to avoid aspiration.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: Gastric lavage is contraindicated due to aspiration hazard. Preferred antidotes are charcoal and milk. In cases of severe aspiration pneumonitis, consider monitoring arterial blood gases to ensure adequate ventilation. Observe the patient for 6 hr. If vital signs become abnormal or symptoms develop, obtain a chest x-ray.

Section 7. Spill: Leak, and Disposal Procedures

Spill/Leak: Notify safety personnel, evacuate area for large spills, remove all heat and ignition sources, and provide maximum explosion-proof ventilation. Cleanup personnel should protect against vapor inhalation and liquid contact. Clean up spills promptly to reduce fire or vapor hazards. Use a noncombustible absorbent material to pick up small spills or residues. For large spills, dike far ahead to contain. Pick up liquid for reclamation or disposal. Do not release to sewers or waterways due to health and fire and/or explosion hazard. Follow applicable OSHA regulations (29 CFR 1910.120). Diesel fuel oil No. 2-D spills may be environmental hazards. Report large spills.

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

EPA Designations

RCRA Hazardous Waste (40 CFR 261.21): Ignitable waste CERCLA Hazardous Substance (40 CFR 302.4): Not listed SARA Extremely Hazardous Substance (40 CFR 355): Not listed

SARA Toxic Chemical (40 CFR 372.65): Not listed

OSHA Designations

Air Contaminant (29 CFR 1910.1000, Subpart Z): Not listed

Section 8. Special Protection Data

Goggles: Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133).

Respirator: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, use a NIOSH-approved respirator with a mist filter and organic vapor cartridge. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. Other: Wear impervious gloves, boots, aprons, and gauntlets to prevent skin contact.

Ventilation: Provide general and local explosion-proof ventilation systems to maintain airborne concentrations that promote worker safety and

productivity. Local exhaust ventilation is preferred since it prevents contaminant dispersion into the work area by controlling it at its source. (103)

Safety Stations: Make available in the work area emergency eyewash stations, safety/quick-drench showers, and washing facilities.

Contaminated Equipment: Never wear contact lenses in the work area: soft lenses may absorb, and all lenses concentrate, irritants. Remove this material from your shoes and equipment. Launder contaminated clothing before wearing. Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking,

smoking, using the toilet, or applying cosmetics.

Section 9. Special Precautions and Comments

Storage Requirements: Use and storage conditions should be suitable for a OSHA Class II combustible liquid. Store in closed containers in a well-ventilated area away from heat and ignition sources and strong oxidizing agents. Protect containers from physical damage. To prevent static sparks, electrically ground and bond all containers and equipment used in shipping, receiving, or transferring operations. Use nonsparking tools and explosion-proof electrical equipment. No smoking in storage or use areas.

Engineering Controls: Avoid vapor or mist inhalation and prolonged skin contact. Wear protective rubber gloves and chemical safety glasses where contact with liquid or high mist concentration may occur. Additional suitable protective clothing may be required depending on working conditions. Institute a respiratory protection program that includes regular training, maintenance, inspection, and evaluation. Practice good personal hygiene and housekeeping procedures. Do not wear oil contaminated clothing. At least weekly laundering of work clothes is recommended. Do not put oily rags in pockets. When working with this material, wear gloves or use barrier cream.

Transportation Data (49 CFR 172.101)

DOT Shipping Name: Fuel oil

DOT Hazard Class: Combustible liquid

ID No.: NA 1993 **DOT Label:** None

DOT Packaging Exceptions: 173.118a **DOT Packaging Requirements: None**

MSDS Collection References: 1, 6, 7, 12, 73, 84, 101, 103, 126, 127, 132, 133, 136, 143, 146

Prepared by: MJ Allison, BS; Industrial Hygiene Review: DJ Wilson, CIH; Medical Review: AC Darlington, MD; Edited by: JR Stuart, MS

LAIDLAW ENVIRONMENTAL SERVICES Real-Time Air Monitoring Record

Date:	Location:	
Instrument:	Tank#:	
Calibrated:		
Weather (temp, humidity, wind & directio	n):	
Sampled By:		

Event #	Reading	Time	Initials	Comments (level of protection)
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SUPERVISOR'S REPORT OF INCIDENT

			A. INCIDEN	DAIA				
NCIDENT DATE:		2. FACILITY/	PROJECT:		****	3.	FACILITY NUMBER:	
DAY OF THE WEEK:	os os	5. TIME INCIDENT 6. OCCURRED			6. DA	6. DATE/TIME REPORTED:		
. INCIDENT REPORTED TO:						TITLE:		
8. EMPLOYEE NAME & SSN#: 9. DEF		DEPT: 10. JOB TITLE:		11. AGE: 12 START DATE:		12 START DATE:	13. JOB SERVICE:	
4. BODY PART: BACK	15. NATU	IRE OF INJU	RY:	<u> </u>			16. MEDICAL ATTENTION:	
□ HANDS □ HEAD	□ AM	☐ AMPUTATION ☐ CUT, PUNCTURE ☐ CONTUSION, BRUISE			JSION, BRUISE	□ NEAR MISS ONLY		
□ EYES □ LEGS	□BU	□ BURN □ SPRAIN, STRAIN □ INFECTION OF WOUND				TION OF WOUND	□ NONE □ FIRST AID ON SITE	
□ TRUNK □ FEET			☐ FOREIGN BODY (EY	E) –	INHAL	ATION, INGESTION	□ DR'S OFFICE □ HOSPITAL (ER)	
□ INTERNAL □ ARMS	□ <i>HE</i> .	RNIA	☐ FRACTURE, DISLOC	CATION [OTHER	}		
□ OTHER:	17. (U.S. OPERATIONS ONLY) DRUG/ALCOHOL TEST ☐ YES ☐ NO LOCATION OF CLINIC:					□ NONE □ EMPLOYEE REFUSEI MEDICAL TREATMEI		
	·						EMPLOYEE SIGNATURE/DATE	
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			C. INCIDEN	T TYPE		···		
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1. IMMEDIATE

D. CAUSES

2. HIDDEN				
IMMEDIA	ATE CAUSE(S)		HIDDEN CAUSE(S)	
3. SUBSTANDARD ACTIONS 4. SUBSTANDARD CONDITIONS			5. PERSONAL FACTORS	
□ OPERATING EQUIPMENT WITHOUT AUTHORITY □ FAILURE TO WARN □ FAILURE TO SECURE □ OPERATING AT IMPROPER SPEED □ MAKING SAFETY DEVICES INOPERABLE □ REMOVING SAFETY DEVICES □ USING DEFECTIVE EQUIPMENT □ USING EQUIPMENT IMPROPERLY □ FAILING TO USE PPE PROPERLY □ IMPROPER LOADING □ IMPROPER PLACEMENT □ IMPROPER PLIFTING □ IMPROPER POSITION FOR TASK □ SERVICING EQUIPMENT IN OPERATION □ HORSEPLAY □ OTHER:	□ INADEQUATE GUARDS OR BARRIERS □ INADEQUATE OR IMPROPER PROTECTIVE EQUIPMENT □ DEFECTIVE TOOLS, EQUIPMENT OR MATERIALS □ CONGESTION OR RESTRICTED ACTION □ INADEQUATE WARNING SYSTEM □ FIRE AND EXPLOSION HAZARDS □ POOR HOUSEKEEPING: DISORDER □ HAZARDOUS ENVIRONMENTAL CONDITIONS: GASES, DUSTS, SMOKES, FUMES, VAPORS □ NOISE EXPOSURES □ RADIATION EXPOSURES □ HIGH OR LOW TEMPERATURE EXPOSURES □ INADEQUATE OR EXCESS ILLUMINATION □ INADEQUATE VENTILATION □ OTHER:	- LACK - LACK - STRES - IMPRI - OTHE 6. JOB FAC - INADE	5. PERSONAL FACTORS INADEQUATE CAPABILITY LACK OF KNOWLEDGE LACK OF SKILL STRESS IMPROPER MOTIVATION OTHER: 6. JOB FACTORS INADEQUATE LEADERSHIP/SUPERVISION INADEQUATE ENGINEERING INADEQUATE MAINTENANCE INADEQUATE MAINTENANCE INADEQUATE WORK STANDARDS WEAR AND TEAR ABUSE OR MISUSE OTHER:	
E. COR	RECTIVE & PREVENTATIVE ACTIONS	5		
WHAT ARE YOU DOING TO PREVENT SIMILAR OCC	URRENCES? (MUST BE COMPLETED BY FACILITY/PROJ	ECT MANAGE	R) - LIST ALL THAT APPLY	
1. ACTION ITEM 2. RESPONSIBLE PARTY			3. DATE DUE	
4. SUPERVISOR NAME:	SIGNATURE:		DATE:	
5. FACILITY MANAGER NAME:	SIGNATURE:		DATE:	
F. REVIEV	V COMMENTS - HEALTH & SAFETY U	JSE		
1. INCIDENT CLASSIFICATION: □ NEAR MISS (INCIDENT ONLY) □ FIRST AID □ RECORDABL. DAYS AW.	E (NO LOST DAYS)	2. SE □ FÄTALI		
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PLEASE PRINT				
MUST BE COMPLETED WITHIN TWENTY-	FOUR (24) HOURS. COPY T	O: FACILIT	Y MANAGER	

FACILITY MANAGER
FACILITY FILES
REGIONAL HEALTH & SAFETY MANAGER
CORPORATE CLAIMS MANAGER

Safety-Kleen (NE) Training Documentation Form

The following people have been instructed on the contents of the Health and Safety Plan (HASP) for the Morgan Materials Inc. Superfund Site location as required by 29 CFR 1910.120. Topics included: Name of personnel responsible for site safety and health; site safety and health hazards; site personal protective equipment requirements; safe work practices; site engineering controls; medical surveillance requirements; site monitoring requirements; drum handling procedures.

Date:	Page	of	
Name(Print)	Signature	Position	S.S.N.
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Instructor Name		Instructor Signature_	

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HEALTH AND SAFETY PROCEDURE

TITLE: LOCKOUT/TAGOUT OF ENERGY SOURCES

PROCEDURE NO: SAF-07-3 PAGE 1 OF 11

APPROVED BY TITLE	DATE	EFFECTIVE DATE: 10/1/1998
Curtis W. Rankins, Vice President, Health & Safety	10/1/98	REVIEW DATE: 10/1/2001
Robert Arquilla, Vice President, Administration	10/15/24	SUPERSEDES: SAF-07-2

I. PURPOSE

This procedure establishes the minimum requirements for the lockout and tagout of machinery and equipment to ensure that employees are protected against the unexpected start-up of machines/equipment or release of stored energy which could cause injury. Hazardous energy sources shall be isolated before employees perform service, maintenance, repair or replacement activities. The unexpected activation, sudden release of stored energy, or inadvertent contact with energized equipment can produce serious injury or death.

II. RESPONSIBILITIES

A. Location/Project Management

- Location/Project Management is responsible for the identification of energy sources which require control as well as the equipment and machinery affected prior to any work which requires testing, repair, or replacement.
- Location/Project Management will determine the employees who are authorized to engage in lockout procedures. Only these employees will be issued lockout/tagout equipment by Health and Safety.
- 3. Ensure that Health and Safety Standard Operating Procedures (SOPs) and training in lockout/tagout requirements has been provided when:

- a) guards or safety devices are removed from equipment,
- b) during servicing of equipment or machinery,
- c) when an employee must place any part of the body where it may be caught by moving machinery (cleaning or oiling parts, etc.),
- d) when contact with any form of energy is possible, e.g., electrical, hydraulic, pneumatic, etc.,
- e) during all confined space entries when applicable.
- 4. Enforce the use of both locks and tags whenever energy isolation is required.
- Provide the procedures for release of lockout/tagout equipment including machine inspection, notification to employees, removal of lockout/tagout devices, and testing or start-up of equipment or machines.
- 6. Provide all employees affected the information necessary concerning the lockout/tagout system used by contractors on Safety-Kleen property or project sites. The contractor's equipment and procedures may vary from those required in this procedure.

B. Managers/Supervisors

- 1. Managers/Supervisors are responsible for training employees in the identification of activities requiring energy control, lockout/tagout, isolation procedures, Health and Safety SOPs, testing, and reactivating equipment and machinery.
- 2. Ensure employees use only those locks and tags authorized and provided by the Health and Safety/EHS Representative.
- Obtain assistance from facility management or Health and Safety if uncertain about the application of a control procedure or equipment operation.

C. Health and Safety

- Health and Safety will assist facility and site management with instructions on the control of hazardous energy sources including approval of the lockout/tagout devices to be used at each facility.
- 2. Any other type of lockout/tagout device, not specified in this procedure, which must be utilized for employee safety (e.g., a specially designed valve handle cover) must be approved by Health and Safety prior to use.

D. Engineering/Maintenance

- Engineering and Maintenance personnel are to ensure that new equipment or overhauled equipment can accommodate locks for subsequent application of this procedure when required.
- 2. Plant supervision, along with plant engineering, will inspect equipment and identify all devices (switch, valve or any other energy isolating device) which shall be used for the lockout and tagout.

E. Employees

- 1. All employees shall comply with the established procedures for controlling hazardous energy sources. Failure to comply may result in disciplinary action, including possible termination.
- 2. Employees are responsible for the equipment issued such as lock devices, keys, and tags.
- 3. An employee shall not attempt to operate any switch, valve, or other energy isolating device when it is locked or tagged out.

III. REQUIREMENTS

A. Equipment

The following requirements apply to all facilities where the isolation of energy will take place:

- 1. Prepare a written program that describes how the location will comply with the requirements of this procedure.
- 2. Prepare an equipment specific procedure (Master Tag Out List) for locking out and tagging each piece of equipment in the facility for which an equipment-specific procedure does not need to be prepared if all of the following apply:
 - a) The machine or equipment has no potential for stored or residual energy or reaccumulation of stored energy after shutdown which could endanger personnel;
 - b) The machine or equipment has a single source which can be readily identified and isolated
 - c) The isolation and locking out of that energy source will completely deenergize and activate the machine or equipment;

- CROOT/TAGOOT OF ENERGY SCORCES SAF-07-3
 - d) The machine or equipment is isolated from that energy source and locked out during servicing or maintenance;
 - e) A single lockout device will achieve a locked out condition;
 - f) The lockout device is under the exclusive control of the authorized employee(s) performing the servicing or maintenance;
 - g) The servicing or maintenance does not create hazards for other employees.

An example of a piece of equipment that meets all of the above conditions is a hard wired bench grinder.

- 1. There is no potential for stored energy;
- 2. There is only one source of energy (electrical);
- 3. Disconnecting the breaker will completely deenergized and deactivate the grinder;
- 4. The mechanic will apply a lock to the breaker before beginning work on the grinder;
 - 5. Only a single lock is required;
 - 6. The mechanic uses his/her personal safety lock (No one else has a key for the lock);
 - 7. Work on the grinder does not create a hazard for anyone else in the area.
- 3. The following equipment will be provided by Health and Safety at facilities and sites which require control of energy source:
 - a) <u>Locks</u> will be issued by the plant supervision to the individual(s) responsible for application of a lockout procedure.
 - b) <u>Multiple-lock hasps</u> will be issued when lockout procedures require more than one lock to be used for lockout at a time.
 - c) Warning Tags are to accompany the placement of each lock. Every lock out device <u>must</u> be accompanied by an identification tag. The tag will not be removed except by the employee who placed it on the machine or equipment at the completion of the work requiring lockout procedure.

B. Lockout/Tagout Standard Operating Procedures

Written standard operation procedures (SOPs) will be developed prior to:

 Any repair, adjustment, cleaning, lubrication decontamination, cleanup, removal or any other activity on energized equipment where there is a hazard from an energized system.

- 2. Lockout of a piece of equipment that has been found to be unsafe to operate.
- 3. Entry into a permit-required confined space where energized equipment or systems may endanger the safety of the worker(s).
- 4. Installation or removal of equipment that may be activated by an energy source.

C. Lockout/Tagout Methods

- 1. Lockout and tagout methods will be developed which ensure safe work on all energized systems which present a hazard.
 - a) De-energize all equipment and systems. This requires:
 - 1) Shut off all electrical power at the source.
 - 2) Bleed off all hydraulic/pneumatic pressure and turn off all supply valves.
 - Lower or block any moving or suspended parts (such as rams on a compactor) to prevent its travel or cycling.
 - 4) Shut off all fuel, water, steam, or other chemical feed lines and blind the lines as appropriate (e.g., using flange blanks). Only double block and bleed is acceptable.
 - 5) Any other measures necessary to ensure energy isolation.
 - b) Ensure the equipment is de-energized by testing it.
 - c) Place a lock and tag on the power source switch, valve, etc. The device or equipment must accept a locking device, a safety tag is not sufficient by itself. The tag must include:
 - 1) The name of the person who placed it.
 - The date the tag was affixed.
 - 3) A brief explanation for the lockout.
 - d) Various chain (to secure locks to valve handles) lengths and dimensions may be required to enable lockout. Maintenance

personnel are required to provide this as necessary.

- e) If more than one employee will be working on the equipment, each employee is to affix their personal lock on a multi-lock hasp.
- f) If the power source is beyond the physical control of the employee, appropriate steps must be taken to ensure that the system is not energized until the employee is out of danger. This may include physically disconnecting the energy source.
- g) When lockout/tagout devices will be used at a client site, the client's representative is to be advised of the intended use and the lockout/tagout program requirements are to be clearly defined and coordinated.
- h) When equipment or machinery is to be restored to normal operations, check the area around the machines or equipment to ensure that no one is exposed.
- i) After all equipment and employees are clear, remove all lockout or tagout devices. Operate the energy isolating devices to restore energy to the machine or equipment.
- j) The lock(s) and tag(s) are to be removed by reversing the procedure. Only the individual(s) who placed the devices in service are permitted to take them out of service.

D. Contractors

- 1. If outside personnel are involved in lockout/tagout activities, the contractor must provide a copy of their program, as well as receive overview training on Safety-Kleen's Lockout/Tagout Program.
- Facility management must ensure that employees understand and comply with restriction and prohibitions of the contractor's energy control procedures.
- 3. It is the responsibility of the contractor employer to review the contractor's lockout/tagout program with facility personnel. The contractor employer and the Safety-Kleen primary authorized employer must agree on the specific lockout/tagout program that will be used for each job.

E. Special Circumstances

1. Multiple Lock Requirements:

- a) If more than one employee is required to lockout equipment, each shall place their personal lock on the energy isolating device(s).
- b) When an energy isolating device cannot accept multiple locks, a multiple lock hasp is to be used.

2. Removal of Locks by Others:

- a) The operations supervisor has verified that the employee who attached the device is not at the facility;
- b) If the employee who placed a lock and tag is not available to remove it, the lock may be removed under the company's supervision.
- c) After the lock is removed, the employee must be advised as soon as possible that the lock has been removed before resuming work.

3. Testing or Positioning Machines and Equipment:

- a) In situations where lockout or tagout devices need to be temporarily removed from the energy isolating devices and the machine or equipment energized to test or position that machine or equipment, the following sequence of procedures must be followed:
 - 1) Clear the machine or equipment of tools and other nonessential materials.
 - 2) Remove employees from the machine or equipment area.
 - 3) Remove the locks and tags.
 - 4) Energize and proceed with testing or positioning.
 - 5) De-energize all systems.
 - 6) Re-apply energy control measures.
 - 7) Proceed as with any other lockout/tagout procedure.

F. Training

- 1. Safety-Kleen Employees
 - a) Affected employees

All affected employees will receive initial training on the control of hazardous energy, and on an overview of the facility's lockout/tagout program and procedures. All affected employees must receive annual refresher training.

b) Authorized Employees

All authorized employees must receive initial training on the control of hazardous energy. In addition each authorized employee must receive detailed initial training on the facility's lockout/tagout program and procedures. Each authorized employee should also receive refresher training on facility-specific programs and procedures. In addition, authorized employees must be trained on any new procedures when the new procedures are issued.

G. Auditing

1. Periodic inspections/audits shall be conducted at least annually.

Appendices A and B provide examples of annual audits.

IV. REFERENCES

CFR 1910.147

V. APPENDICES

Appendix A: Lockout/Tagout Audit Checklist
Appendix B: Lockout/Tagout Audit Form

APPENDIX A

ANNUAL LOCK, TAG & TRY AUDIT CHECKLIST				
DATE:				
AUDITOR(S):				
EMPLOYEES INCLUDED IN INSPECTION:				
ACTIVITY BEING AUDITED:				
CLEARING				
[] Danger locks with proprietor tags in place on all energy sources defined in the equipment-specific procedure? YES NO Steps taken to correct deficiencies.				
[] Proprietor lock with proprietor tag in place on the lock box? YES NO Steps taken to correct any deficiencies.				
[] Have all line/equipment breaks and ties been performed in accordance with the work plan? YES NO Comments:				
[] If equipment-specific procedure was used, is it current? YES NO If NO, what changes need to be made?				
AUTHORIZATION TO PERFORM WORK				
] Have all tasks been properly identified on the work plan? YES NO				
] Are work group tags in place on the danger locks and lock box? YES NO				

APPENDIX A

ANNUAL LOCK, TAG & TRY AUDIT CHECKLIST

(Continued)				
INDIVIDUAL DANGER TAGGING/PERSONAL SAFETY LOCKING				
[] Has every individual working on this system or equipment properly protected themselves with a lock and danger tag? YES NO				
COMMENTS:				
[] All deficiencies corrected? YES NO If NO, explain:				
NOTE: This form is intended to be the minimum auditing requirements.				

Explain any NO answers below:

APPENDIX B

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Check the person were interviewed	s that
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YES	NO
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ilities?	
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	Check the person were interviewed YES Tyes Ty

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HEALTH AND SAFETY PROCEDURE

TITLE: LOCKOUT/TAGOUT OF ENERGY SOURCES

PROCEDURE NO: SAF-07-3 PAGE 1 OF 11

APPROVED BY TITLE	<u>DATE</u>	EFFECTIVE DATE: 10/1/1998
Curtis W. Rankins, Vice President, Health & Safety	10/1/98	REVIEW DATE: 10/1/2001
Robert Arquilla, Vice President, Administration	19/15/28	SUPERSEDES: SAF-07-2
easery / July	19/15/71	GOTENOLDES. SAF-07-2

I. PURPOSE

This procedure establishes the minimum requirements for the lockout and tagout of machinery and equipment to ensure that employees are protected against the unexpected start-up of machines/equipment or release of stored energy which could cause injury. Hazardous energy sources shall be isolated before employees perform service, maintenance, repair or replacement activities. The unexpected activation, sudden release of stored energy, or inadvertent contact with energized equipment can produce serious injury or death.

II. RESPONSIBILITIES

A. Location/Project Management

- 1. Location/Project Management is responsible for the identification of energy sources which require control as well as the equipment and machinery affected prior to any work which requires testing, repair, or replacement.
- Location/Project Management will determine the employees who are authorized to engage in lockout procedures. Only these employees will be issued lockout/tagout equipment by Health and Safety.
- 3. Ensure that Health and Safety Standard Operating Procedures (SOPs) and training in lockout/tagout requirements has been provided when:

- SAF-07-3
- a) guards or safety devices are removed from equipment,
- b) during servicing of equipment or machinery,
- c) when an employee must place any part of the body where it may be caught by moving machinery (cleaning or oiling parts, etc.),
- d) when contact with any form of energy is possible, e.g., electrical, hydraulic, pneumatic, etc.,
- e) during all confined space entries when applicable.
- 4. Enforce the use of both locks and tags whenever energy isolation is required.
- 5. Provide the procedures for release of lockout/tagout equipment including machine inspection, notification to employees, removal of lockout/tagout devices, and testing or start-up of equipment or machines.
- 6. Provide all employees affected the information necessary concerning the lockout/tagout system used by contractors on Safety-Kleen property or project sites. The contractor's equipment and procedures may vary from * those required in this procedure.

B. Managers/Supervisors

- Managers/Supervisors are responsible for training employees in the identification of activities requiring energy control, lockout/tagout, isolation procedures, Health and Safety SOPs, testing, and reactivating equipment and machinery.
- 2. Ensure employees use only those locks and tags authorized and provided by the Health and Safety/EHS Representative.
- 3. Obtain assistance from facility management or Health and Safety if uncertain about the application of a control procedure or equipment operation.

C. Health and Safety

- 1. Health and Safety will assist facility and site management with instructions on the control of hazardous energy sources including approval of the lockout/tagout devices to be used at each facility.
- 2. Any other type of lockout/tagout device, not specified in this procedure. which must be utilized for employee safety (e.g., a specially designed valve handle cover) must be approved by Health and Safety prior to use.

D. Engineering/Maintenance

- 1. Engineering and Maintenance personnel are to ensure that new equipment or overhauled equipment can accommodate locks for subsequent application of this procedure when required.
- 2. Plant supervision, along with plant engineering, will inspect equipment and identify all devices (switch, valve or any other energy isolating device) which shall be used for the lockout and tagout.

E. Employees

- 1. All employees shall comply with the established procedures for controlling hazardous energy sources. Failure to comply may result in disciplinary action, including possible termination.
- 2. Employees are responsible for the equipment issued such as lock devices, keys, and tags.
- 3. An employee shall not attempt to operate any switch, valve, or other energy isolating device when it is locked or tagged out.

III. REQUIREMENTS

A. Equipment

The following requirements apply to all facilities where the isolation of energy will take place:

- 1. Prepare a written program that describes how the location will comply with the requirements of this procedure.
- 2. Prepare an equipment specific procedure (Master Tag Out List) for locking out and tagging each piece of equipment in the facility for which an equipment-specific procedure does not need to be prepared if all of the following apply:
 - a) The machine or equipment has no potential for stored or residual energy or reaccumulation of stored energy after shutdown which could endanger personnel;
 - b) The machine or equipment has a single source which can be readily identified and isolated
 - c) The isolation and locking out of that energy source will completely deenergize and activate the machine or equipment;

- e) A single lockout device will achieve a locked out condition;
- f) The lockout device is under the exclusive control of the authorized employee(s) performing the servicing or maintenance;
- g) The servicing or maintenance does not create hazards for other employees.

An example of a piece of equipment that meets all of the above conditions is a hard wired bench grinder.

- There is no potential for stored energy;
- 2. There is only one source of energy (electrical);
- Disconnecting the breaker will completely deenergized and deactivate the grinder;
- 4. The mechanic will apply a lock to the breaker before beginning work on the grinder;
- 5. Only a single lock is required;

LOCKOUT/TAGOUT OF ENERGY SOURCES

- 6. The mechanic uses his/her personal safety lock (No one else has a key for the lock);
- 7. Work on the grinder does not create a hazard for anyone else in the area.
- 3. The following equipment will be provided by Health and Safety at facilities and sites which require control of energy source:
 - a) <u>Locks</u> will be issued by the plant supervision to the individual(s) responsible for application of a lockout procedure.
 - b) Multiple-lock hasps will be issued when lockout procedures require more than one lock to be used for lockout at a time.
 - c) Warning Tags are to accompany the placement of each lock. Every lock out device must be accompanied by an identification tag. The tag will not be removed except by the employee who placed it on the machine or equipment at the completion of the work requiring lockout procedure.

B. Lockout/Tagout Standard Operating Procedures

Written standard operation procedures (SOPs) will be developed prior to:

1. Any repair, adjustment, cleaning, lubrication decontamination, cleanup, removal or any other activity on energized equipment where there is a hazard from an energized system.

- 2. Lockout of a piece of equipment that has been found to be unsafe to operate.
- 3. Entry into a permit-required confined space where energized equipment or systems may endanger the safety of the worker(s).
- 4. Installation or removal of equipment that may be activated by an energy source.

C. Lockout/Tagout Methods

- 1. Lockout and tagout methods will be developed which ensure safe work on all energized systems which present a hazard.
 - a) De-energize all equipment and systems. This requires:
 - 1) Shut off all electrical power at the source.
 - 2) Bleed off all hydraulic/pneumatic pressure and turn off all supply valves.
 - 3) Lower or block any moving or suspended parts (such as rams on a compactor) to prevent its travel or cycling.
 - 4) Shut off all fuel, water, steam, or other chemical feed lines and blind the lines as appropriate (e.g., using flange blanks). Only double block and bleed is acceptable.
 - 5) Any other measures necessary to ensure energy isolation.
 - b) Ensure the equipment is de-energized by testing it.
 - c) Place a lock and tag on the power source switch, valve, etc. The device or equipment must accept a locking device, a safety tag is not sufficient by itself. The tag must include:
 - 1) The name of the person who placed it.
 - 2) The date the tag was affixed.
 - 3) A brief explanation for the lockout.
 - d) Various chain (to secure locks to valve handles) lengths and dimensions may be required to enable lockout. Maintenance

personnel are required to provide this as necessary.

- e) If more than one employee will be working on the equipment, each employee is to affix their personal lock on a multi-lock hasp.
- f) If the power source is beyond the physical control of the employee, appropriate steps must be taken to ensure that the system is not energized until the employee is out of danger. This may include physically disconnecting the energy source.
- g) When lockout/tagout devices will be used at a client site, the client's representative is to be advised of the intended use and the lockout/tagout program requirements are to be clearly defined and coordinated.
- h) When equipment or machinery is to be restored to normal operations, check the area around the machines or equipment to ensure that no one is exposed.
- i) After all equipment and employees are clear, remove all lockout or tagout devices. Operate the energy isolating devices to restore energy to the machine or equipment.
- j) The lock(s) and tag(s) are to be removed by reversing the procedure. Only the individual(s) who placed the devices in service are permitted to take them out of service.

D. Contractors

- 1. If outside personnel are involved in lockout/tagout activities, the contractor must provide a copy of their program, as well as receive overview training on Safety-Kleen's Lockout/Tagout Program.
- 2. Facility management must ensure that employees understand and comply with restriction and prohibitions of the contractor's energy control procedures.
- 3. It is the responsibility of the contractor employer to review the contractor's lockout/tagout program with facility personnel. The contractor employer and the Safety-Kleen primary authorized employer must agree on the specific lockout/tagout program that will be used for each job.

E. Special Circumstances

1. Multiple Lock Requirements:

- a) If more than one employee is required to lockout equipment, each shall place their personal lock on the energy isolating device(s).
- b) When an energy isolating device cannot accept multiple locks, a multiple lock hasp is to be used.

2. Removal of Locks by Others:

- a) The operations supervisor has verified that the employee who attached the device is not at the facility;
- b) If the employee who placed a lock and tag is not available to remove it, the lock may be removed under the company's supervision.
- c) After the lock is removed, the employee must be advised as soon as possible that the lock has been removed before resuming work.

3. Testing or Positioning Machines and Equipment:

- a) In situations where lockout or tagout devices need to be temporarily removed from the energy isolating devices and the machine or equipment energized to test or position that machine or equipment, the following sequence of procedures must be followed:
 - 1) Clear the machine or equipment of tools and other nonessential materials.
 - 2) Remove employees from the machine or equipment area.
 - 3) Remove the locks and tags.
 - 4) Energize and proceed with testing or positioning.
 - 5) De-energize all systems.
 - 6) Re-apply energy control measures.
 - 7) Proceed as with any other lockout/tagout procedure.

F. Training

- 1. Safety-Kleen Employees
 - a) Affected employees

All affected employees will receive initial training on the control of hazardous energy, and on an overview of the facility's lockout/tagout program and procedures. All affected employees must receive annual refresher training.

b) Authorized Employees

All authorized employees must receive initial training on the control of hazardous energy. In addition each authorized employee must receive detailed initial training on the facility's lockout/tagout program and procedures. Each authorized employee should also receive refresher training on facility-specific programs and procedures. In addition, authorized employees must be trained on any new procedures when the new procedures are issued.

G. Auditing

1. Periodic inspections/audits shall be conducted at least annually.

Appendices A and B provide examples of annual audits.

IV. REFERENCES

CFR 1910.147

V. APPENDICES

Appendix A: Lockout/Tagout Audit Checklist Appendix B: Lockout/Tagout Audit Form

APPENDIX A

ANNUAL LOCK, TAG & TRY AUDIT CHECKLIST				
DATE:				
AUDITOR(S):				
EMPLOYEES INCLUDED IN INSPECTION:				
ACTIVITY BEING AUDITED:				
ACTIVITY BEING ADDITED.				
CLEARING				
[] Danger locks with proprietor tags in place on all energy sources defined in the equipment-specific procedure? YES NO Steps taken to correct deficiencies.				
[] Proprietor lock with proprietor tag in place on the lock box? YES NO Steps taken to correct any deficiencies.				
[] Have all line/equipment breaks and ties been performed in accordance with the work plan? YES NO Comments:				
[] If equipment-specific procedure was used, is it current? YES NO If NO, what changes need to be made?				
AUTHORIZATION TO PERFORM WORK				
[] Have all tasks been properly identified on the work plan? YES NO				
Are work group tags in place on the danger locks and lock box? YES NO				

APPENDIX A

ANNUAL LOCK, TAG & TRY AUDIT CHECKLIST (Continued)				
INDIVIDUAL DANGER TAGGING/PERSONAL SAFETY LOCKING				
[] Has every individual working on this system or equipment properly protected themselves with a lock and danger tag? YES NO				
COMMENTS:				
[] All deficiencies corrected? YES NO If NO, explain:				
NOTE: This form is intended to be the minimum auditing requirements.				

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APPENDIX B

Explain any NO answers below:

D	ATE: AL	JDITOR(S):		
M	aster Tag Out List Number:			
De	escribe the job being audited:			
Na	imes of persons working on job:		Check the per were interview	
1.	Are danger locks in place on all energy isolat	ing devices?	YES	NO
2.	Are proprietor tags in place on all danger loci	KS		
3.	Is proprietor lock and tag on lock box?		-	-
4.	Is maintenance lock and tag on lock box?			
5.	Is (are) work group lock and tag on lock box	,		-
6.	Did each member of work group install perso	nal safety lock/tag?		
7.	Was a Master Tag Out List used?			
8.	Was it current?			-
9.	Did authorized employees understand their re	sponsibilities?		
10	.Were deficiencies corrected?		######################################	

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JOB SAFETY BRIEFING

	Facility / Customer						
45	Location / Address:						
	Type of Work / Job Numb	er					
safety-kleen.	Safety Briefing Conducted	1 By:		Date:		Time:	
			DISCUSSED				
Item	Agent(s)	R	isk(s)		Actions(s)	Required	
Health -							
Concerns -							
(Exposure)							
		-					
Safety _							
Concerns _	. 44						
(Actions &							
Conditions) _							
TRAINING: Have	all personnel received	job specific tra	aining?				
MERGENCY PR	OCEDURES:						
77							
					·····		
	. PROTECTIVE EQUI finimum Required)	PMENT)	AL		IAL JOB SPE	C	N/A
		-	Hot Work P	Permit:			_
			Confined Sp	oace Perm	it:		
			Excavation 1	Permit:		_	
			Tag/Lockou	ıt			
	acial Equipment		Bonding/Gi	rounding:		-	
Sp	ecial Equipment		MSDS/Ana	lytical Rev	view:		-
			Barricade/Is	solation:			
-			Health & Sa	fety App	roval:		
	SIG	NATURES C	F ATTENDEE	ES .			
							
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HEALTH AND SAFETY PROCEDURE

TITLE: MANUAL MATERIAL HANDLING

PROCEDURE NO: SAF-02-3 PAGE 1 OF 6

APPROVED BY TITLE	DATE	EFFECTIVE DATE: 10/1/1998
Curtis W. Rankins, Vice President, Health & Safety	10/1/98	REVIEW DATE: 10/1/2001
Robert Arquilla, Vice President, Administration	10/15/28	SUPERSEDES: SAF-02-2

I. PURPOSE

This procedure applies to all facilities within Safety-Kleen and those employees who perform, or are responsible for, manual material handling tasks. These tasks may include moving drums, boxes, bags, reagent bottles, lumber, and other objects.

This procedure addresses movement of materials by hand and movement with the assistance of carts, roller conveyors, drum dollies, and other hand powered equipment. A separate procedure, entitled "Powered Industrial Truck Operations", addresses the movement of materials with mechanized equipment. (See Procedure No. SAF-03.)

II. RESPONSIBILITIES

A. Location/Project Management

 Location/project management is responsible for identifying manual material handling risks, and developing work practices and control measures to reduce risk and prevent injuries. Equipment which may assist the employees with manual handling activities is to be selected and provided.

B. Managers/Supervisors

1. Operations supervision is responsible for developing and implementing safe work practices and employee training.

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2. Monitoring and enforcing this procedure with employees is the responsibility of Operations supervision.

C. Customer Service/Sales

- 1. Customer Service and Sales must consider and identify hazards and requirements when arranging for client site pick-ups.
- 2. Material handling arrangements, such as forklift and loading dock availability, must be included in the sales agreement.

D. Employees

- 1. Employees are responsible for following safe work practices. Work areas and tools are to be inspected daily. Unsafe conditions and defective equipment are to be reported immediately to supervision.
- Employees shall follow all provisions found in this procedure. If compliance is not possible for any reason, they are to contact a Health & Safety Representative or their Supervisor.
- 3. Employees are responsible for reporting unsafe work practices and conditions at the work site.

III. REQUIREMENTS

A. Job Hazard Analysis

- Injuries associated with manual handling may be the result of an unsafe act such as improper lifting, carrying too heavy a load, and failing to wear proper protective equipment. Management and supervisors are required to consider items such as:
 - a) How may the materials being handled cause injury?
 - b) Can the job be engineered to eliminate manual handling?
 - c) Can the employees be given handling aids, such as trucks or hoists, which will reduce risk?
 - d) Will protective clothing or safety equipment help prevent injuries?
 - e) Can equipment layout or design be modified to reduce or eliminate the need for physical effort?

B. Design

- Ergonomic design is to be considered in all workplace construction projects. All tasks in the workplace should be designed to fit the worker whenever possible.
- 2. During the conceptual or design phase of new facilities and equipment or significant changes in existing equipment, facility management is responsible to conduct a hazard review analysis with Health & Safety Representative which would include consideration of ergonomic factors.

C. Drum Handling

- 1. All drum handling must be accomplished by utilizing mechanical aids when possible. No employee shall attempt to manually move a drum when mechanical assistance is available and possible to use. The following equipment should be considered.
 - a) Powered Industrial Trucks forklifts (See SAF-03 for Powered Industrial Trucks Procedures).
 - b) Drum Carts At least one drum cart <u>must</u> be present at all job sites and on each vehicle carrying drums. It is recommended that drum carts are assigned to each vehicle/trailer and installed.
 - c) Overhead cranes
- 2. When it is not possible to utilize mechanical aids to move drums, manual handling may be considered.
- 3. When a drum is required to be placed into an overpack container, mechanical assistance must be utilized when possible.

D. Large Diameter Hose Handling

1. Vacuum/pressure hoses of 3-inch diameter or more are typically awkward, of limited flexibility and/or heavy to move.

Often connections are in poorly accessible locations with high overexertion strain potential. Safe hose handling in such circumstances requires the following considerations:

a) Pre-plan a safe access route for hose movement and placement that minimizes the length of hose required with as few bends up, down and sideways as possible.

- b) Two-man carry should be used for lengthy hoses.
- c) Carry hose on-the-hip when having to drag a length into position.
- d) Use a rope on the hose in situations where it is suspended down into a lower elevation (e.g., a sump) or is raised to a higher elevation (e.g., onto the top of a tank).
- e) As with any lifting task, always position the body to permit use of the legs.

E. Training

- 1. Proper instruction is to be provided to all employees who are required to move heavy objects. INITIAL training will be provided in initial 24/40 HR Training Courses, Facility Orientation Training and Annual Refresher Training.
- 2. Training modules are available for the following job tasks: drum handling, lifting, use of drum carts, and overpacking procedures.

F. General Work Rules

- 1. The following are general requirements for manual handling activities:
 - a) Hands and fingers are vulnerable and require special care to protect them. Be aware of pinch points when working with moving equipment and when placing or releasing objects by hand. Use appropriate gloves to minimize injury occurrence and severity at all times.
 - b) Feet and legs may sustain manual material handling injuries. Proper foot protection is required for any employee moving drums or managing any heavy object; steel toed work shoes or boots with metatarsal guards are required when handling drums by hand.
 - c) The eyes, head, and trunk of the body can be injured when opening wire-bound boxes or crates. Eye protection and gloves are required to prevent injury from the ends of the binding, nails, and wood splinters flying loose during the opening of such boxes.
 - d) The employee is required to wear the appropriate respirator and protective clothing based on the nature of the task or the materials being handled.
 - e) Use more than one person to lift heavy objects or use mechanical

aids such as fork trucks. Employees should not lift more than 50 pounds. They should obtain assistance from another employee or use equipment designed to move the object.

- f) Use handles to get a better grip on an object. Attach handles or holders when available or use a basket with handles to transport several small objects, such as sample containers.
- g) Balance the containers or load to avoid unequal distribution of force which may result in tipping and spilling of materials or which may cause injury, such as strain.
- h) Prior to lifting or handling objects, inspect for (and remove if possible), slivers, jagged edges and slippery, rough, wet, greasy or dirty surfaces.
- i) Use appropriate gloves for rough, slippery or jagged objects.
- j) Break the load into smaller objects or containers and provide more time and adequate breaks for employees involved in repetitive tasks.
- k) The crowbar is a common hand tool used to open crates. Because it can slip, employees should position themselves so that they will not be pinched or struck if the bar should slip or the object moves. Store the crowbar properly when not in use.
- Roller conveyors may be used for moving heavy objects such as drums. Employees should not use their hands and feet to change the direction of an object.
- m) Movement of drums requires special precautions and instructions.
- n) Care must be taken when using two and four-wheeled hand carts.
- o) Long objects like ladders, lumber or pipe should be carried over the shoulder. When two or more employees carry an object, they should place it on the same shoulder and keep in step.

IV. REFERENCES

- Ayoub A. Mahmound, Ph.D.: <u>Journal of Occupational Medicine/Vol. 24, No. 9, September 1982:</u> Control of Manual Lifting Hazards: 11. Job Redesign.
- Kentucky Occupational Safety and Health: Your Back and Your Job.
- Panagram Publications, Inc. Smart Lifting.

• NIOSH Criteria Document, Recommended Standard for Material Handling.

V. APPENDICES

None

Thermal Extremes I. INTRODUCTION

A comfortable environment is the result of simultaneous control of temperature, humidity and air distribution within the workers' environment. Thermal comfort is the function of many variables including the time of year, the relative humidity, amount of air movement and the amount of energy being expended by the worker.

Heat is transferred from object to object or body to body by the following methods: conduction, convection and radiation. One of the above transfers occurs when a temperature differential exists between bodies or objects. The heat will move from an area of higher temperature to an area of lower temperature.

There are two sources of heat which are important. The first source is heat generated by the body due to physical activity. This type of heat is called metabolic heat. The second source of heat is obtained form the surrounding environment. In order for the body to get rid of excess metabolic heat, the body must sweat. If the body fails to reduce the amount of metabolic heat through sweating, then the temperature of the body begins to rise.

Situations that require the worker to either don PPE due to an emergency response, don PPE in order to perform a regular work task, or work in temperature extremes with or without PPE will have thermal stress placed on the body. Therefore, careful monitoring must be done in order that the worker remains free from extreme thermal stress. Monitoring can done by observation and using instrumentation to monitor the temperature and related factors such as wind speed, relative humidity, ambient air temperature and body temperature.

Implementation

- 1. A control program for both cold and heat stress should be implemented to protect the employee from the effects of cold and/or heat stress.
- 2. The cold stress program should contain the following information:
 - a. Medical supervision of the workers which includes prephysicals to insure that the employee is fit to perform the task under the temperature extremes expected.
 - b. Employee orientation and training on cold stress, cold-induced illnesses, symptoms of these illnesses, proper PPE, work practices and first aid procedures.
 - c. Work-rest regimens with enforced rest periods and heated break areas.
 - d. Scheduled drink breaks to replace lost fluids.
 - e. Environmental monitoring to be used to determine wind chill and air temperature so that work schedules can be flexible.
 - f. Reduction of cold stress by the means of engineering controls which will reduce the amount of exposure by the employee and the proper PPE.

- 3. The heat stress program should include the following:
 - a. Limiting the amount or modifying the amount of exposure.
 - b. Reducing the amount of physical work to be done thereby reducing the amount of metabolic heat being generated.
 - c. Acclimatize the employee to the heat through gradual exposure and physical conditioning.
 - d. Training the workers in health and safety procedures for working in hot environments.
 - e. Medical screening of the workers to make sure that the workers are able to tolerate heat during physical activities.

PRINCIPLES AND CONCEPTS

A. Cold Environments

1. Managing the cold

- a. The body's first reaction to cold is to constrict the blood vessels in the skin and/or by the action of shivering. The body functions best at a rectal temperature of 99-100 degrees F.
- b. The body has two parts, the shell and the core, that must be thought of when explaining temperature control. The shell is composed of millions of tiny blood vessels (capillaries), nerves, muscles, and fat. The core is composed of the heart lungs, brain, kidneys, and other internal organs.
- c. The first part of the body to be affected by cold is the skin which cools the blood flowing through the capillaries. The response to this signal is transmitted to the hypothalamus. The hypothalamus is a part of the brain that regulates the temperature of the body. When the hypothalamus receives a signal from the skin that the skin is being chilled, the hypothalamus institutes two processes. One of the processes is to conserve heat already in the body while the other process is to generate new heat. Heat conservation is accomplished by causing the small blood vessels in the skin to constrict or grow smaller in diameter. This action will turn the shell (skin) into an insulator used to contain the heat in the body. The sweat glands are also shut down which will restrict the amount of heat lost through the process of evaporation. The generation of new heat begins with the process of producing glucose, a simple sugar, which is burned in the metabolic processes. The new glucose is produced from the breakdown of fat in the body. The glucose causes the heart to beat faster which in turn pumps oxygen and glucose rich blood to tissues which need the ingredients. The glucose and oxygen will be used by the cells to produce more metabolic heat through the action of the energy cycle. The muscles in the skin will begin to contract at a rapid rate which causes shivering. This shivering helps to raise the body's metabolic rate.

B. Cold Disorders

1. Frostbite

- a. The extremities do not receive enough blood from the central core. Since there is a reduction in the amount of heat being provided, some of the fluids around the cells may begin to freeze. The freezing point of skin is 30 degrees F. Once the fluid begins to freeze there is damage and/or loss of body tissue. The most vulnerable parts are the nose, cheeks, ears, fingers, and toes. Damage may be to the outer layers of the skin or the underlying tissue also. The result of frostbite may include scarring, tissue death, possible amputation of the affected parts, or permanent loss of movement of the affected part.
- b. Wind velocity plays a role in causing frostbite. As the wind velocity increases, the heat loss is greater which will increase the rate of frostbite.
- c. Degrees of Frostbite
 - 1. First Degree: Freezing without blistering or peeling.
 - 2. Second Degree: Freezing with blistering and peeling.
 - 3. Third Degree: Freezing with the destruction of skin tissue and possibly deeper tissue.

d. Symptoms

- 1. Skin changes color to white or grayish yellow which can progress to reddish-violet and finally to black as the tissue dies.
- 2. Pain may be felt at first followed by numbness.
- 3. Blisters may appear.
- 4. The affected part is cold and numb.

2. Trench Foot

- a. This is a condition where the affected part is exposed to cold without freezing and combined with persistent dampness or actual immersion in water.
- b. Symptoms
 - 1. Swelling (edema), tingling, itching, and severe pain followed by blistering, death of skin tissue, and ulceration.

2. If areas of the body other than the feet are involved, this condition is known as chilblains.

3. Frostnip

- a. The skin turns white after exposure to a cold wind. May be a precursor to frostbite.
- b. Generalized Injury

4. Hypothermia

a. Hypothermia develops between the air temperatures of 30-50 degrees F. Hypothermia is the gradual lowering of the inner core temperature which could result in death if the temperature is not brought back to normal levels.

b. Symptoms

First symptoms

- i. Uncontrollable shivering and the sensation of cold.
- ii. The heartbeat slows down may become irregular. The pulse may weaken and there is a change in blood pressure.

Secondary symptoms

- i. Uncontrollable fits of shivering, vague or slow slurred speech, memory lapses, incoherence, and possible drowsiness.
- ii. Cool skin, slow, irregular breathing, low blood pressure, and exhaustion. Low rectal temperatures
- i. Significant drop in blood pressure, pulse rate, and respiration with the possibility of death as the temperature continues to drop.

C. Factors affecting cold injury

- 1. Exposure to humidity and high winds.
- 2. Contact with wetness or metal.
- 3. Inadequate clothing, age, and general health.
- 4. Physical conditions include allergies, vascular disease, excessive smoking and drinking, specific drugs and medicines.
- 5. Wind chill is a significant factor which is often overlooked when dealing with heat loss.
 - a. Heat loss from convection is the most significant and deceptive factor.

- b. Wind chill results from the wind removing the thin layer of air that acts as an insulator between the skin and the outside air.
- c. The wind chill factor is the cooling effect of any combination of temperature and wind velocity or movement.
- d. The wind chill factor does not take into effect the following factors:
- 1. The body part exposed to the cold.
- 2. The level of activity with its effect on body heat production.
- 3. The amount of clothing worn.

D. Prevention of Cold Stress

1. Factors of Prevention

a. Acclimatization:

This allows the body to become use to the type of climate it will be subjected to. This done by exposing the body to the cold at increasing intervals of time. The body will undergo some changes which will result in increased comfort and a reduction to cold stress.

b. Water and salt replacement:

Due to the dryness of the air, there is an increased loss of water through the skin and lungs. As evaporation continues by the action of sweating, a person must replace water and salt which will help to increase the flow of blood to the extremities.

c. Control Measures

1. Engineering controls

- a. general or spot heating to increase the temperature of the work area.
- b. shield the work area if there is a draft or increased wind velocity.
- c. the air velocity in refrigerated rooms must be kept as low as possible.
- d. if the temperature is below 30 degrees F, then the metal handles of tools should be covered with an insulating material.
- e. if feasible, equipment and processes should be substituted, isolated, relocated or redesigned to reduce cold stress at the work site.

2. Administrative Controls

- a. The controls include work practices or rules designed to reduce the amount of cold stress placed on the worker.
 - Work-rest schedule
 - Scheduled rest breaks
 - Move work to warmer area when feasible
 - Allow workers to take extra breaks when needed.
 - Minimize sitting still or standing for long periods of time.

b. power tools, hoists, cranes or lifting aids should be used to reduce the amount of the workload on the body.

E. Heat Stress Disorders

- 1. Heat stress is caused because of the difficulty in regulating the amount of heat being produced resulting in the increase in the body core temperatures. There are many different types of heat stress disorders.
- 2. Heat strain is a series of responses by the body to heat stress. The amount of strain is dependent on the amount of heat stress, age, physical fitness, amount of acclimatization and the degree of dehydration of the worker.
- 3. There is a number of heat disorders that are associated with heat stress.

a. Heat Rash (prickly heat)

A heat disorder which is identified by tiny raised blisters in areas of irritation with a prickling sensation during the exposure. This condition is caused by prolonged exposure to humid heat with the skin being constantly wet with unevaporated sweat. Due to the constant wetness, the sweat glands become plugged and irritated. Treatment for this disorder is the use of lotions to help dry the area and keep the area clean. Prevention off this disorder is to allow the skin to dry between exposures.

b. Heat Cramps

Heat cramps is the painful spasms of muscles used during work. The spasms may begin either during the course of work or after the task is completed. Heat cramps are brought on by heavy sweating during hot work and/or drinking large volumes of water without replacing salt loss. The spasms are caused because the sweating depletes the amount of salts in the muscle and as water enters the muscle, the electrolytes(salts) are further diluted which results in cramping. Treatment of this disorder can be accomplished by taking fluids in by mouth that contain electrolytes. A faster way of getting the fluids and electrolytes into the system is by using an IV. Prevention of this condition can be accomplished by making sure that there is adequate salt intake at meals and drinking plenty of fluids with electrolytes at scheduled breaks.

c. Heat Exhaustion

- 1. Heat exhaustion is characterized by the following symptoms:
 - fatigue, nausea, headache, giddiness;
 - skin is clammy, complexion is pale, or may be flush;
 - worker may faint due to low blood pressure and a weak pulse;
 - oral temperature may be normal or low while the rectal temperature is usually elevated (99.5-101.3 F);

- heat exhaustion due to a lack of water will result in low urine output which is highly concentrated.
- 2. Heat exhaustion may be brought about because of sustained exertion in the heat, not being acclimated to the climate, or the worker does not replace the water loss due to heavy sweating. The body's response to heat exhaustion is to show some form of dehydration either by a lack of water or a lowered blood volume. The lowered blood volume results from the demand for blood at the skin level (body trying to regulate temperature) and demand by the muscles to function.
- 3. Treatment of heat exhaustion is accomplished by removing the victim to a cooler area, keeping the person at rest until the water balance has been restored, and giving the person fluids (if the person is conscious). If the person is unconscious, call for medical help immediately.
- 4. Heat exhaustion can be prevented by acclimatizing the workers, having drinking water available at all times, scheduling breaks, and having rest areas that are cool.

d. Heatstroke

- 1. The symptoms of heat stroke are:
 - b hot dry skin which is usually red, mottled, or cyanotic;
 - rectal temperature is 104 degrees F or over;
 - confusion, loss of consciousness, convulsions;
 - rectal temperature may continue to rise;
 - death may occur if medical treatment is not started immediately.
- 2. Workers who are more sensitive to heat stroke may exhibit one or more of the following characteristics:
 - sustained exertion while being unacclimatized to the environment;
 - lack of physical fitness and obesity;
 - recent alcohol intake;
 - dehydration;
 - chronic cardiovascular disease.
- 3. Heatstroke causes the failure of the sweating mechanism which in turn causes a rise in the body temperature because the cooling effects of sweat evaporating are gone.
- 4. Treatment of heatstroke is the immediate and rapid cooling of the body by immersion into chilled water with massage to move the blood around or by placing the person in a wet sheet and fanning the person to produce a cooling effect. The person must be monitored and treated for shock if necessary.
- 5. Prevention of heatstroke is accomplished by:

- medical screening of the workers;
- acclimatization;
- monitoring of the workers during the time they are being exposed to sustained heat.

4. PPE and Heat Stress

Protective clothing that shields the body from chemical exposure also limits the dissipation of body heat and moisture that creates a dangerous situation in hot environments. Heat stress can occur in a little as fifteen (15) minutes depending on the type of work being done and the type of clothing being worn. Personal protective equipment should be evaluated for the benefit relative to the potential for increasing the risk of heat stress. Once the proper PPE is selected, the safe duration of work/rest periods should be determined based on the following:

- a. anticipated work rate;
- b. ambient air temperature and other environmental factors;
- c. type of protective ensemble;
- d. the worker's characteristics and fitness.

5. Monitoring for Heat Stress

- a. Monitoring for heat stress may be accomplished by using the following methods:
- Heart rate: If the heart rate exceeds 110 beats per minute at the beginning of the rest cycle, the next work cycle should be shortened by one-third with the rest period the same length;
- Oral temperature: If the oral temperature exceeds 99.6 degrees F, the next work cycle should be shortened by one-third with the rest period being the same length of time (a worker should not be allowed to reenter the work zone if the oral temperature exceeds 100.6 degrees F.);
- Body water loss: The body water loss should not exceed 1.5 per cent total body weight loss in a work day.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION II

IN THE MATTER OF THE MORGAN MATERIALS,: INC. SUPERFUND SITE

Buffalo Merchandise Distribution Center, Inc., Morgan Materials, Inc., Solutia Inc.,

: ADMINISTRATIVE ORDER

Respondents

Proceeding under Section 106(a) of : Index Number the Comprehensive Environmental : II-CERCLA-98-0213 Response, Compensation, and Liability: Act, as amended, 42 U.S.C. § 9606(a). :

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I. JURISDICTION

- 1. This Administrative Order (hereinafter), "Order") is issued to Buffalo Merchandise Distribution Center, Inc., Morgan Materials, Inc., and Solutia Inc. (hereinafter, "Respondents") and provides for the performance of a removal action by Respondents at the Morgan Materials, Inc. Superfund Site (the "Site"), which consists of a portion of the warehouse facility leased by Buffalo Merchandise Distribution Center, Inc. and located at 261 Great Arrow Avenue, Buffalo, Erie County, New York.
- This Order is issued pursuant to the authority vested in the President of the United States under Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9606(a), which authority was delegated to the Administrator of the United States Environmental Protection Agency ("EPA") on January 23, 1987, by Executive Order No. 12580 (52 Federal Register 2926, January 29, 1987) and further delegated to the EPA Regional Administrators by EPA Delegation Nos. 14-14-A and 14-14-B.
- EPA has notified the New York State Department of Environmental Conservation ("NYSDEC") of this Order pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

II. PARTIES BOUND

4. This Order applies to and is binding upon Respondents and their successors and assigns. Any change in the ownership or corporate status of a Respondent, including, but not limited to, any transfer of assets or real or personal property, shall not

required by this Order, they shall be deemed to have violated this Order and to have failed or refused to comply with this Order. Respondents' written notice shall describe, using facts that exist on or prior to the effective date of this Order, any "sufficient cause" defenses asserted by Respondents under Sections 106(b) and 107(c)(3) of CERCLA. Respondent's written notice shall be sent to the EPA addressees listed in Paragraph 50 above. The absence of a response by EPA to the notice required by this paragraph shall not be deemed to be an acceptance of Respondents' assertions.

U.S. ENVIRONMENTAL PROTECTION AGENCY

Regional Administrator

U.S. Environmental Protection Agency

Region II



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

290 BROADWAY

NEW YORK, NEW YORK 10007-1866

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VIA EXPRESS MAIL AND FACSIMILE (25 pages)

Solutia Inc.
Attn: Brent J. Gilhousen, Esq.
10300 Olive Boulevard
P.O. Box 66760
St. Louis, MO 63166-6760
(fax) (314) 674-2808
(phone) (314) 674-8504

Buffalo Merchandise Distribution Center, Inc. Attn: Robert Boeckel, Jr. 261 Great Arrow Avenue Buffalo, NY 14207 (fax) (716) 877-1479 (phone) (716) 877-2411

Morgan Materials, Inc. Attn: Donald Sadkin 380 Vulcan Street Buffalo, NY 14207 (fax) (716) 873-2181 (phone) (716) 873-2000

Re: Morgan Materials Superfund Site, Buffalo, Erie County, New York

Gentlemen:

Enclosed please find a copy of the administrative order ("Order") pursuant to the Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended ("CERCLA"), 42 U.S.C. § 9606(a) which has been issued by EPA with regard to a removal action at the Morgan Materials, Inc. Superfund Site (the "Site"), which consists of a portion of the warehouse facility leased by Buffalo Merchandise Distribution Center, Inc. and located at 261 Great Arrow Avenue, Buffalo, Erie County, New York.

The Order requires your companies to undertake a removal action at the Site. Pursuant to Paragraph 36 of the Order, this removal action includes the sampling, analysis, securing, stabilization and segregation of all drums and other materials at the Site, and the removal and off-site disposal of all Monsanto drums. As set forth in Paragraph 74 of the Order, there are substantial penalties for failure to comply with this Order. Pursuant to Paragraph 83, this Order shall become effective seven days after receipt, except as noted in accordance with the procedures set

alter the responsibilities that Respondent has under this Order. Respondents are jointly and severally responsible for carrying out all activities required by this Order. Compliance or noncompliance by one or more Respondent(s) with any provision of this Order shall not excuse or justify noncompliance by any other Respondents.

- 5. Respondents shall provide a copy of this Order to any prospective owners or successors before a controlling interest in a Respondent's assets, property rights, or stock is transferred to the prospective owner or successor.
- 6. Not later than sixty (60) days prior to the transfer by any Respondent of any real property interest in any property included within the Site, such Respondent shall submit a true and correct copy of the transfer document(s) to EPA, and shall identify the transferee by name, principal business address, and effective date of the transfer.

III. DEFINITIONS

- 7. Unless otherwise expressly provided herein, terms used in this Order which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or its implementing regulations. Whenever terms listed below are used in this Order or in an attachment to this Order, the following definitions shall apply:
- a. "Day" means a calendar day unless otherwise expressly stated. "Working day" shall mean a day other than a Saturday, Sunday, or Federal holiday. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or Federal Holiday, the period shall run until the close of business on the next working day.
- b. "Hazardous substance" shall have the meaning provided in Section 101(14) of CERCLA, 42 U.S.C. §9601(14).
- c. "Party" or "Parties" means the United States Environmental Protection Agency and/or Respondents.
- d. "Site" shall mean that portion of the warehouse facility leased by Buffalo Merchandise Distribution Center, Inc., located at 261 Great Arrow Avenue in Buffalo, Erie County, New York, which houses chemicals owned by Morgan Materials, Inc.
- e. "Waste" or "Waste Materials" means (1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any "pollutant or contaminant" under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (3) any "solid waste" under Section 1004(27) of the Resource Conservation and Recovery Act, 42 U.S.C. § 6903(27); and (4) any mixture containing any of the

forth in Paragraphs 84 through 87, regarding a compliance conference and your notice of intention to comply with the Order.

For your convenience in coordinating, I have included the parties's respective phone and fax numbers alongside your addresses. If you have any questions, please contact me at (212) 637-3170.

Sincerely yours,

Brian E. Carr

Assistant Regional Counsel

cc: Richard Lippes, Esq.
Counsel for Morgan
Allen & Lippes
1260 Delaware Avenue
Buffalo, NY 14209
(fax)(716) 884-6117
(phone) (716) 884-4800

Stacey L. Stater, Esq. Counsel for Solutia Inc. Thompson Coburn One Mercantile Center St. Louis, MO 63101-1693 (fax)(314) 552-7199 (phone) (314) 552-6199 constituents noted in (1), (2) or (3), above.

f. "Work" means all work and other activities required by and pursuant to this Order.

IV. FINDINGS OF FACT AND CONCLUSIONS OF LAW

- 8. On March 14, 1997, EPA received a request from NYSDEC to determine the need for an appropriate removal action under CERCLA at the Morgan Chemicals, Inc. Site ("Morgan I Site"), located at 373 Hertel Avenue, Buffalo, Erie County, New York. Morgan I had been used to store "off-specification" and discontinued chemicals reportedly purchased by Morgan Materials, Inc. ("Morgan") for later possible re-sale. In response to this request, EPA determined that a removal action was necessary, and subsequently issued an Administrative Order on Consent, Index No. II-CERCLA-97-0212, to Morgan for cleanup of the Morgan I Site.
- 9. In November 1997 and April 1998, in connection with the inspection of a second Morgan facility, located at 380 Vulcan Street, Buffalo, Erie County, New York, EPA also inspected the Site, which was an additional facility used by Morgan for the storage of such "off-specification" and discontinued chemicals. This facility is a warehouse operated by Buffalo Merchandise Distribution Center, Inc., and located at 261 Great Arrow Avenue in Buffalo, Erie County, New York. The warehouse is approximately one million square feet in size. The Site consists of that portion of the warehouse which holds chemicals owned by Morgan.
- 10. On April 15, 1998, EPA notified Morgan of its potential liability with respect to the Site and of the need for action to be taken to address the containers of chemicals at the Site. In response to that notification, Morgan has arranged for various companies, who are also participating in the Morgan I cleanup, to dispose of material at the Site which had at one time belonged to them. As a result of this effort, approximately 2,000 drums have been disposed of off-Site to date.
- 11. The Site currently contains approximately 3,000 drums, as well as approximately 800 pallets of other chemical containers. The majority of the drums hold flammable chemicals, and are stored without regard to compatibility. The contents of some drums are unknown. Numerous drums have been stored at the Site for periods in excess of a decade.
- 12. The warehouse, which has a leaking wooden roof, is not in good condition. The warehouse is not rated for storage of flammable materials, nor is it climate controlled. By letter of January 5, 1998, the Buffalo Fire Department issued a notice of violation to Buffalo Merchandise Distribution Center, Inc. with respect to the flammable materials and ordered that the situation

be mitigated. No action has been taken to date.

- 13. Approximately 2,000 of the drums currently at the Site contain flammable liquids consisting of various off-specification solvent-based industrial adhesives which were manufactured by Monsanto Company ("Monsanto"). (For ease of reference, these drums are hereinafter referred to as the "Monsanto drums"). Based on Material Safety Data Sheets, the primary constituents of this material include toluene, vinyl acetate, styrene and other hazardous substances.
- 14. Many of the Monsanto drums are leaking, rusting and/or threatening to topple. Leaking Monsanto drums are in proximity to interior drainage systems in the warehouse which may connect to storm drains and sewers. The leaking warehouse roof may also contribute to contaminant migration. In addition, water resulting from firefighting efforts may enter storm drains and sewers. Spillage and run-off of chemicals from these sources may result in contamination of waterways, including the Scajaquada Creek located less than a mile from the Site, which feeds into the Niagara River, thereby creating possible negative effects to the biota.
- 15. At the time of EPA's inspection, the Monsanto drums were stored directly adjacent to large tanks of chlorinated fluorocarbons ("CFCs"), which hold approximately thirty thousand pounds of pressurized gas. In the event of a fire, these tanks contain valves which automatically vent their contents in order to prevent an explosion. However, a rapid temperature increase could nonetheless create explosive tank conditions. In addition, the gas can become combustible. At higher temperatures, the gases decompose into hydrochloric acid, halogens and other compounds which are toxic and corrosive.
- 16. Large quantities of charcoal and lighter fluid are also stored in close proximity to the Monsanto drums. These conditions create a severe risk of fire and/or explosion. The Monsanto drums are also improperly stored directly adjacent to food products.
- 17. Numerous employees working at the warehouse are at severe risk in the event of a fire or explosion. The warehouse is also adjacent to a large residential area. A public high school is located nearby. In the event of a fire or explosion, firefighters would be at great risk due to the hazards posed by a chemical fire, and a large-scale evacuation of the public might be necessary.
- 18. Additional hazardous substances, pollutants or contaminants are present at the Site, including phthalic anhydride, which is corrosive and should not be exposed to water. This material has been exposed to water as a result of leaking conditions from the

warehouse roof. This material continues to be exposed to water as the roof has not been repaired, and water collects on top of plastic sheeting that has been placed over the pallets of phthalic anhydride.

- 19. Solutia Inc. is the successor-in-interest to the chemical manufacturing division of Monsanto. Based on Solutia Inc.'s August 31, 1998 response to a Request for Information issued by EPA, the materials contained in the Monsanto drums were manufactured between 1980 and 1986. When stored in a climatecontrolled warehouse, these materials have a recommended shelf life of 3-6 months. The Monsanto drums were sold to Morgan between October 1986 and February 1987. The Monsanto drums were sold at a distressed price reflecting approximately 1/25th of the normal cost of this product. Numerous labels were removed and/or altered in connection with the sale. The sale consisted of approximately 1.3 million pounds of material from 29 defective Such defective lots were an unintended byproduct of the manufacturing process. Monsanto's standard procedure was to dispose of defective lots as hazardous waste within 90 days in the event that they could not be re-worked into the intended product. Other than the sale to Morgan, neither Monsanto nor Solutia has ever sold such off-specification adhesive. Solutia Inc.'s August 31, 1998 response to EPA's Request for Information. According to a 1991 Monsanto memorandum, "this material was of questionable quality in 1986." Monsanto's sales documents listed the material sold to Morgan as being "offgrade."
- 20. The leaking of hazardous substances at the Site and their potential migration through drains constitutes a "release," as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22). In addition, based on conditions under which the drums and other containers are stored at the Site, there is a substantial threat of release of hazardous substances into the environment at and from the Site.
- 21. Exposure to the various hazardous substances present at the Site by direct contact, inhalation, or ingestion may cause a variety of adverse human health effects. Regarding the chemicals contained in the Monsanto drums, styrene and ethyl acrylate are considered possible carcinogens, with short term exposure effects including severe eye, skin and respiratory irritation. Toluene is an irritant to eyes, skin and the respiratory system. Prolonged exposure to these chemicals may cause more severe effects. Regarding the phthalic anhydride, health effects include eye and skin burns, and respiratory burns if inhaled.
- 22. The Site is a "facility" within the meaning of Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).
- 23. Morgan Materials, Inc. and Buffalo Merchandise Distribution

Center, Inc. are corporations duly organized and existing under the laws of the State of New York. Solutia Inc. is a corporation duly organized and existing under the laws of the State of Delaware. Each Respondent is a "person" within the meaning of Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

- 24. Respondent Morgan Materials, Inc. entered into a contract with Buffalo Merchandise Distribution Center, Inc. to store, and is the current owner of, the hazardous substances located at the Site. Respondent Morgan Materials, Inc. is thus a responsible party within the meaning of Sections 107(a)(1) and 107(a)(2) of CERCLA, 42 U.S.C. §§ 9607(a)(1) and 9607(a)(2).
- 25. The Site property is currently leased by Respondent Buffalo Merchandise Distribution Center, Inc. In addition, pursuant to the above-mentioned contract, Respondent Buffalo Merchandise Distribution Center, Inc. maintains control and responsibility for storage conditions of the hazardous substances at the Site. Respondent Buffalo Merchandise Distribution Center, Inc. is thus a responsible party within the meaning of Sections 107(a)(1) and 107(a)(2) of CERCLA, 42 U.S.C. §§ 9607(a)(1) and 9607(a)(2).
- 26. Respondent Solutia Inc. arranged for the disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances which came to be located at the Site. Respondent Solutia Inc. is thus a responsible party within the meaning of Section 107(a)(3) of CERCLA, 42 U.S.C. § 9607(a)(3).
- 27. EPA provided Respondents with the opportunity to enter into an administrative order on consent for the purpose of performing a removal action at the Site. Respondents declined that opportunity.

V. DETERMINATIONS

The conditions present at the Site constitute a threat to public health, welfare, or the environment based upon factors set forth in Section 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 CFR § 300.415(b)(2). These factors include, but are not limited to, the following conditions:

- a. actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants;
- hazardous substances or pollutants or contaminants in drums, barrels, tanks or other bulk storage containers, that may pose a threat of release;
- c. threat of fire or explosion;

- d. weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;
- e. the lack of availability of other appropriate federal or state response mechanisms to respond to the release.
- 28. The actual or threatened release of hazardous substances from the Site may present an imminent and substantial endangerment to the public health, welfare, or the environment within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).
- 29. The actions required by this Order are necessary to protect the public health or welfare or the environment, are in the public interest, and are consistent with CERCLA and the NCP, 40 CFR Part 300.

VI. ORDER

30. Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations, and other information available to EPA, it is hereby ordered that Respondents shall undertake a response action at the Site in accordance with the requirements specified below. All activities specified below shall be initiated and completed as soon as possible even though maximum time periods for their completion are specified herein.

Designation of Contractor and Project Coordinator

Within five (5) days after the effective date of this Order, Respondents shall select a Project Coordinator and submit the proposed Project Coordinator's name, address, telephone number, and qualifications to EPA. The Project Coordinator shall be responsible for oversight of the implementation of this Order. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site work. Project Coordinator shall have technical expertise sufficient to adequately oversee all aspects of the work contemplated by this Order. EPA retains the right to disapprove of any Project Coordinator proposed by Respondents. If EPA disapproves of a proposed Project Coordinator, Respondents shall propose a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, and qualifications within seven (7) days following EPA's disapproval. Receipt by Respondents' approved Project Coordinator of any notice or communication from EPA relating to this Order shall constitute receipt by Respondents. Respondents may change their Project Coordinator, subject to approval by EPA as set forth in this paragraph. Respondents shall notify EPA at least seven (7) days before such a change is made. The initial notification may be

orally made but it shall be promptly followed by a written notice.

- 32. Respondents shall retain a contractor to perform the Work. Respondents shall notify EPA of the name and qualifications of the proposed contractor within ten (10) days of the effective date of this Order. Respondents shall also notify EPA of the name and qualifications of any other contractor or subcontractor proposed to perform work under this Order at least ten (10) days prior to commencement of such work.
- 33. EPA retains the right to disapprove of any, or all, of the contractors and/or subcontractors proposed by the Respondents to conduct the Work. If EPA disapproves of any of Respondents' proposed contractors to conduct the Work, Respondents shall propose a different contractor within seven (7) days of EPA's disapproval.
- 34. Respondents shall provide a copy of this Order to each contractor and subcontractor retained to perform the work required by this Order. Respondents shall state, in all contracts or subcontracts entered into for work required under the provisions of this Order, that such contractors or subcontractors, including their agents and employees, shall perform activities required by such contracts or subcontracts in compliance with this Order and all applicable laws and regulations. Respondents shall be responsible for ensuring that their contractors and subcontractors perform the work contemplated herein in accordance with this Order.
- 35. Respondents shall direct all submissions required by this Order to the EPA On-Scene Coordinator by certified mail at the address provided in paragraph 50 below.

Description of Work

- 36. Respondents shall maintain security at the Site as directed by EPA until further notice from EPA. Within thirty (30) days of the date of contractor notification pursuant to Paragraph 32, Respondents shall submit to EPA for review and approval a detailed work plan (hereinafter, the "Work Plan"). The Work Plan shall provide for the stabilization, segregation and inventory of all materials at the Site, followed by the disposal of the Monsanto drums. The Work Plan shall include a detailed description of how those tasks will be accomplished, and shall also include, but not be limited to, the components and information specified below:
 - a. A Health and Safety Plan, which shall satisfy the requirements of: 29 CFR Part 1910.120, Hazardous Waste Operations Standards; 29 CFR Part 1910.176, Materials Handling and Storage; and, EPA's "Standard Operating

Safety Guides" (OSWER, 1988). The plan shall also include a fire safety and prevention program, perimeter and work area air monitoring program, and spill prevention and cleanup plan.

- A sampling and analysis plan ("S&A Plan") for the b. sampling of all drums and other Waste Materials present at the Site. The S&A Plan should include, as appropriate, the procedures set forth in "Test Methods for Evaluating Solid Wastes" ("SW-846") (November, 1986, or as updated) for sampling and testing, as required by EPA. Procedures in the S&A Plan shall include testing for compatibility and disposal characteristics, as needed, in order to determine proper staging, treatment and disposal methods for each category of Waste found. The S&A Plan shall be completed in accordance with, but not limited to, the relevant applicable methods as specified in the following EPA published documents: "Guidance Document for Cleanup of Surface Tank and Drum Sites" (May, 1985); "Drum Handling Practices at Hazardous Waste Sites" (January, 1986); "Characterization of Hazardous Waste Sites - A Methods Manual, Volume I - Site Characterization, and Volume II - Available Sampling Methods" (August, 1985 and December, 1984).
- c. If deemed appropriate by Respondents, procedures for bulking, stabilization, and/or solidification of drum and container contents as warranted; and the steps Respondents will employ to determine if bulking and solidification are recommended (the "Bulking Plan").
- d. Procedures for decontamination, crushing, and disposal of empty drums and contaminated pallets and debris generated from off-Site shipments of drums, containers or generated from bulking operations, if applicable.
- e. A Quality Assurance/Quality Control Plan (the "QA/QC Plan") and a description of Chain of Custody Procedures to be followed, which shall satisfy the following requirements:
 - ii The QA/QC Plan shall be completed in accordance with Section 10 of SW-846, and relevant portions of "Guidance for Preparation of Combined Work/Quality Assurance Project Plans for Environmental Monitoring" (U.S. EPA, Office of Water Regulations and Standards, May, 1984);
 - ii The Respondents shall use QA/QC procedures in accordance with the QA/QC Plan submitted and

approved by EPA pursuant to this Order and shall use standard EPA Chain of Custody procedures, as set forth in the National Enforcement Investigations Center Policies and Procedures Manual, as revised in November, 1984, and the National Enforcement Investigations Center Manual for the Evidence Audit, published in September, 1981, and SW-846, for all sample collection and analysis activities conducted pursuant to this Order.

- f. A transportation and disposal plan (the "Transportation and Disposal Plan") shall be prepared for describing the process of off-Site disposal of the Monsanto drums.
- g. A detailed time schedule for performance of specific tasks and for submitting plans and reports to EPA, as set forth in this Order.
- h. In addition, the Work Plan shall provide for the following work:
 - i. Stabilization of the Site. Drums and other containers will be overpacked and stabilized as necessary, rearranged, and moved during inventory and inspection activities to facilitate completion of the inventory and inspection task in addition to the efficient removal of drums for transport and disposal.
 - ii. Mobilization. Set-up of office, laboratory, and decontamination trailers as necessary to properly support field activities under this Order; clear and prepare the nearest loading dock as drum staging area(s); removal of all obstructions from inside the Site and operations area and provide explosion-proof temporary lighting as necessary; establish work zones including, but not limited to, a support zone, contaminant reduction zone and exclusion zone.
 - iii. <u>Demobilization</u>. Demobilization activities shall include proper disposal or decontamination of protective clothing and other materials; disposal of laboratory samples collected; removal of any equipment or structures constructed to facilitate the field activities under this Order, except as may be otherwise directed by EPA; and the securing of the Site area, if any Waste or

other materials remain on-Site following the removal of Monsanto drums.

- 37. EPA either will approve the Work Plan, in whole or in part, and/or will require modifications thereto pursuant to paragraphs 43 through 46 below. Upon its approval by EPA, the Work Plan shall be deemed to be incorporated into and shall be an enforceable part of this Order.
- 38. Within ten (10) days after EPA's approval of the Work Plan, Respondents shall commence implementation of the EPA-approved Work Plan. Respondents shall fully implement the EPA-approved Work Plan in accordance with the terms and schedule therein and in accordance with this Order. Unless otherwise approved by EPA, all Work provided under Paragraph 36 of this Order shall be completed within one hundred-eighty (180) days of EPA approval of the Work Plan. If EPA approves a portion of the Work Plan but finds the remainder deficient, then EPA, at its discretion, may direct Respondents to proceed with implementation of the approved portion of the Work Plan.

On-scene Coordinator, Other Personnel, and Modifications to EPA-Approved Work Plan

- 39. All activities required of Respondents under the terms of this Order shall be performed only by well-qualified persons possessing all necessary permits, licenses, and other authorizations required by federal, state, and local governments, and all work conducted pursuant to this Order shall be performed in accordance with prevailing professional standards.
- 40. The current EPA On-Scene Coordinator ("OSC") for the Site is: Gregory B. DeAngelis, Response and Prevention Branch, Emergency and Remedial Response Division, U.S. Environmental Protection Agency, 2890 Woodbridge Avenue, Building 209 (MS-211), Edison, N.J. 08837, (732) 906-6874. EPA will notify the Project Coordinator if EPA's On-Scene Coordinator should change.
- 41. EPA, including the OSC, will conduct oversight of the implementation of this Order. The OSC shall have the authority vested in an OSC by the NCP, including the authority to halt, conduct, or direct any work required by this Order, or to direct any other response action undertaken by EPA or Respondents at the Site. Absence of the OSC from the Site shall not be cause for stoppage of work unless specifically directed by the OSC.
- 42. As appropriate during the course of implementation of the actions required of Respondents pursuant to this Order, Respondents or their consultants or contractors, acting through the Project Coordinator, may confer with EPA concerning the required actions. Based upon new circumstances or new information not in the possession of EPA on the date

of this Order, the Project Coordinator may request, in writing, EPA approval of modification(s) to the EPA-approved Work Plan. Only modifications approved by EPA in writing shall be deemed effective. Upon approval by EPA, such modifications shall be deemed incorporated in this Order and shall be implemented by Respondents.

Plans and Reports Requiring EPA Approval

- 43. If EPA disapproves or otherwise requires any modifications to any plan, report or other item required to be submitted to EPA for approval pursuant to this Order, Respondents shall have fourteen (14) days from the receipt of notice of such disapproval or the required modifications to correct any deficiencies and resubmit the plan, report, or other written document to EPA for approval, unless a shorter or longer period is specified in the notice. Any notice of disapproval will include an explanation of why the plan, report, or other item is being disapproved. Respondents shall address each of the comments and resubmit the plan, report, or other item with the required changes within the time stated above. At such time as EPA determines that the plan, report, or other item is acceptable, EPA will transmit to Respondents a written statement to that effect.
- 44. If any plan, report, or other item required to be submitted to EPA for approval pursuant to this Order is disapproved by EPA, even after being resubmitted following Respondents' receipt of EPA's comments on the initial submittal, Respondents shall be deemed to be out of compliance with this Order. If any resubmitted plan, report, or other item, or portion thereof, is disapproved by EPA, EPA may again direct Respondents to make the necessary modifications thereto, and/or EPA may amend or develop the item(s) and recover the costs from Respondents of doing so. Respondents shall implement any such item(s) as amended or developed by EPA.
- 45. EPA shall be the final arbiter in any dispute regarding the sufficiency or acceptability of all documents submitted and all activities performed pursuant to this Order. EPA may modify those documents and/or perform or require the performance of additional work unilaterally.
- 46. All plans, reports and other submittals required to be submitted to EPA pursuant to this Order, upon approval by EPA, shall be deemed to be incorporated in and shall be an enforceable part of this Order.

Reporting

47. During the implementation of this Order, Respondents shall provide written progress reports to EPA every two weeks which fully describe all actions and activities undertaken pursuant to

this Order. Such progress reports shall, among other things, (a) describe the actions taken toward achieving compliance with this Order during the previous two-week period, (b) include all results of sampling and tests and all other data received by Respondents during that period in the implementation of the Work required hereunder, (c) describe all actions which are scheduled for the next two-week period, (d) include other information relating to the progress of work as is customary in the industry, (e) include the Certificates of Destruction referred to in paragraph 65 below, and (f) include information regarding percentage of completion, all delays encountered or anticipated that may affect the future schedule for completion of the Work required hereunder, and a description of all efforts made to mitigate those delays or anticipated delays.

- 48. Respondents shall include in the biweekly progress reports required in paragraph 47 above, a schedule for the field activities which are expected to occur pursuant to this Order during the upcoming month. Respondents shall, in addition, provide EPA with at least one week advance notice of any change in that schedule.
- 49. The Final Report referred to in paragraph 51 below, and other documents submitted by Respondents to EPA which purport to document Respondents' compliance with the terms of this Order shall be signed by a responsible official of Respondents or by the Project Coordinator who has been delegated this responsibility by Respondents and whose qualifications have not been disapproved by EPA pursuant to paragraph 31 of this Order. For purposes of this paragraph, a responsible official is an official who is in charge of a principal business function.
- 50. The Work Plan, the Final Report, and other documents required to be submitted to EPA under this Order shall be sent to the following addressees:

3 copies to:

U.S. Environmental Protection Agency 2890 Woodbridge Avenue Bldg. 209 (MS-211) Edison, NJ 08837 Attention: Morgan Materials, Inc. Site On-Scene Coordinator

1 copy to:

Chief, New York/Caribbean Superfund Branch Office of Regional Counsel United States Environmental Protection Agency 290 Broadway, 17th Floor New York, New York 10007-1866 Attention: Morgan Materials, Inc. Site Attorney

2 copies to:

Michael O'Toole, P.E.
Director, Hazardous Waste Remediation
New York State Department of Environmental
Conservation
50 Wolf Road, Room 212
Albany, New York 12233-7010
Re: Morgan Materials, Inc. Site

51. Within thirty (30) days after completion of all removal activities required under this Order, Respondents shall submit for EPA review and approval a Final Report summarizing the actions taken to comply with this Order. The Final Report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP, entitled "OSC Reports." The Final Report shall include:

- a. a synopsis of all Work performed under this Order;
- b. a detailed description of all EPA-approved modifications to the Work Plan which occurred during Respondents' performance of the Work required under this Order;
- c. a listing of quantities and types of Wastes removed from the Site or handled on-Site, and a complete inventory of any materials remaining on-Site, including any sampling, analyses or other documentation associated with such materials;
- d. a discussion of removal, treatment and disposal options considered for those Wastes;
- e. a listing of the ultimate destination of those Wastes;
- f. a presentation of the analytical results of all sampling and analyses performed, including QA/QC data and chain of custody records;
- g. accompanying appendices containing all relevant documentation generated during the work (<u>e.g.</u>, manifests, invoices, bills, contracts, and permits).
- h. an accounting of expenses incurred by the Respondents at the Site; and
- i. the following certification signed by a person who supervised or directed the preparation of the Final Report:

"I certify that the information contained in and accompanying this certification is true, accurate, and complete."

52. EPA either will approve the Final Report or will require modifications thereto pursuant to paragraphs 43 through 46, above.

Oversight

- 53. During the implementation of the requirements of this Order, Respondents and their contractor(s) and subcontractors shall be available for such conferences with EPA and inspections by EPA or its authorized representatives as EPA may determine are necessary to adequately oversee the work being carried out or to be carried out by Respondents, including inspections at the Site and at laboratories where analytical work is being done hereunder.
- 54. Respondents and their employees, agents, contractor(s) and consultant(s) shall cooperate with EPA in its efforts to oversee Respondents' implementation of this Order.

Community Relations

55. Respondents shall cooperate with EPA in providing information relating to the work required hereunder to the public. As requested by EPA, Respondents shall participate in the preparation of all appropriate information disseminated to the public; participate in public meetings which may be held or sponsored by EPA to explain activities at or concerning the Site; and provide a suitable location for public meetings, as needed.

Access to Property and Information

- 56. EPA, NYSDEC and their designated representatives, including, but not limited to, employees, agents, contractor(s) and consultant(s) thereof, shall be permitted to observe the Work carried out pursuant to this Order. Respondents shall at all times permit EPA, NYSDEC, and their designated representatives full access to and freedom of movement at the Site and any other premises where Work under this Order is to be performed for purposes of inspecting or observing Respondents' progress in implementing the requirements of this Order, verifying the information submitted to EPA by Respondents, conducting investigations relating to contamination at the Site, or for any other purpose EPA determines to be reasonably related to EPA oversight of the implementation of this Order. Access shall also be provided for the purposes of oversight or implementation of additional response actions with respect to materials present at the Site but not disposed of pursuant to this Order.
- 57. In the event that action under this Order is to be performed

in areas owned by or in possession of someone other than Respondents, Respondents shall use their best efforts to obtain access agreements from the present owners within twenty (20) days of the effective date of this Order for purposes of implementing the requirements of this Order. Such agreements shall provide access not only for Respondents, but also for EPA and its designated representatives or agents, as well as NYSDEC and its designated representatives or agents. Such agreements shall specify that Respondents are not EPA's representative with respect to liability associated with Site activities. access agreements are not obtained by Respondents within the time period specified herein, Respondents shall immediately notify EPA of its failure to obtain access and shall include in that notification a summary of the steps Respondents have taken to attempt to obtain access. Subject to the United States' nonreviewable discretion, EPA may use its legal authorities to obtain access for Respondents, may perform those response actions with EPA contractors at the property in question, or may terminate the Order if Respondents cannot obtain access agreements. If EPA performs those tasks or activities with EPA contractors and does not terminate the Order, Respondents shall perform all other activities not requiring access to that property. Respondents shall integrate the results of any such tasks undertaken by EPA into its reports and deliverables.

- Upon request, Respondents shall provide EPA with access to all records and documentation related to the conditions at the Site, hazardous substances found at or released from the Site, and the actions conducted pursuant to this Order except for those items, if any, subject to the attorney-client or work product privilege. Nothing herein shall preclude Respondents from asserting a business confidentiality claim pursuant to 40 C.F.R. All data, information and records created, Part 2, Subpart B. maintained, or received by Respondents or their contractor(s) or consultant(s) in connection with implementation of the Work under this Order, including, but not limited to, contractual documents, invoices, receipts, work orders and disposal records shall, without delay, be made available to EPA upon request, subject to the same privileges specified above in this paragraph. EPA shall be permitted to copy all such documents. Respondents shall submit to EPA upon receipt the results of all sampling or tests and all other technical data generated by Respondents or their contractor(s), or on Respondents' behalf, in connection with the implementation of this Order.
- 59. Upon request by EPA, Respondents shall provide EPA or its designated representatives with duplicate and/or split samples of any material sampled in connection with the implementation of this Order.
- 60. Notwithstanding any other provision of this Order, EPA hereby retains all of its information gathering, access, and

inspection authority under CERCLA, RCRA, and any other applicable statute or regulations.

Record Retention, Documentation, Availability of Information

- 61. Respondents shall preserve all documents and information relating to Work performed under this Order, or relating to the hazardous substances found on or released from the Site, for six years after completion of the Work required by this Order. At the end of the six year period, Respondents shall notify EPA at least thirty (30) days before any such document or information is destroyed that such documents and information are available for inspection. Upon request, Respondents shall provide EPA with the originals or copies of such documents and information.
- 62. All documents submitted by Respondents to EPA in the course of implementing this Order shall be available to the public unless identified as confidential by Respondents pursuant to 40 CFR Part 2, Subpart B, and determined by EPA to merit treatment as confidential business information in accordance with applicable law. In addition, EPA may release all such documents to NYSDEC, and NYSDEC may make those documents available to the public unless Respondents conforms with applicable New York law and regulations regarding confidentiality. Respondents shall not assert a claim of confidentiality regarding any monitoring or hydrogeologic data, any information specified under Section 104(e)(7)(F) of CERCLA, or any other chemical, scientific or engineering data relating to the Work performed hereunder.

Off-Site Shipments

- 63. All hazardous substances, pollutants, or contaminants removed from the Site pursuant to this Order for off-Site treatment, storage, or disposal shall be treated, stored, or disposed of in compliance with (a) Section 121(d)(3) of CERCLA, 42 U.S.C. §9621(d)(3), (b) Section 300.44 of the NCP, (c) the EPA "Superfund Removal Procedures," OSWER Directive Number 9360.0-03B, February 1988, (d) RCRA, (e) the Toxic Substances Control Act ("TSCA"), 15 U.S.C. §2601, et seq., and (f) all other applicable federal and state requirements.
- 64. If hazardous substances from the Site are to be shipped outside of New York State, Respondents shall provide prior notification of such out-of-state waste shipments in accordance with OSWER Directive 9330.2-07. At least five (5) working days prior to out-of-state waste shipments, Respondents shall notify the environmental agency of the accepting state of the following: (a) the name and location of the facility to which the wastes are to be shipped; (b) the type and quantity of waste to be shipped; (c) the expected schedule for the waste shipments; (d) the method of transportation and name of transporter; and (e) treatment and/or disposal method of the waste streams.

65. Certificates of destruction must be provided to EPA upon Respondents' receipt of such. These certificates must be included in the biweekly progress reports.

Compliance With Other Laws

- 66. All actions required pursuant to this Order shall be performed in accordance with all applicable local, state, and federal laws and regulations except as provided in CERCLA §121(e)(1), 42 U.S.C. §9621(e)(1), and 40 CFR §300.415(j). In accordance with 40 CFR §300.415(j), all on-Site actions required pursuant to this Order shall, to the extent practicable, as determined by EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements ("ARARS") under federal environmental or state environmental or facility siting laws. (See "Superfund Removal Procedures: Guidance on the Consideration of ARARS During Removal Actions," OSWER Directive No. 9360.3-02, August 1991).
- 67. Except as provided in Section 121(e)(1) of CERCLA, 42 U.S.C. §9621(e)(1), and the NCP, no permit shall be required for any portion of the Work required hereunder that is conducted entirely on-Site. Where any portion of the Work requires a federal or state permit or approval, Respondents shall submit timely applications and shall take all other actions necessary to obtain and to comply with all such permits or approvals. This Order is not, nor shall it be construed to be, a permit issued pursuant to any federal or state statute or regulation.

Emergency Response and Notification of Releases

- Upon the occurrence of any event during performance of the Work required hereunder which, pursuant to Section 103 of CERCLA, 42 U.S.C. §9603, requires reporting to the National Response Center [(800) 424-8802], Respondents shall immediately orally notify the Chief of the Removal Action Branch of the Emergency and Remedial Response Division of EPA, Region II, at (732) 321-6621, or the EPA Region II Emergency 24-hour Hot Line at (908) 548-8730, of the incident or Site conditions. Respondents shall also submit a written report to EPA within seven (7) days after the onset of such an event, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. The reporting requirements of this paragraph are in addition to, not in lieu of, reporting under CERCLA Section 103, 42 U.S.C. §9603, and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004.
- 69. In the event of any action or occurrence during Respondents' performance of the requirements of this Order which causes or threatens to cause a release of a hazardous substance or which

may present an immediate threat to public health or welfare or the environment, Respondents shall immediately take all appropriate action to prevent, abate, or minimize the threat and shall immediately notify EPA as provided in the preceding Respondents shall take such action in accordance with paragraph. applicable provisions of this Order including, but not limited to, the Health and Safety Plan. In the event that EPA determines that (a) the activities performed pursuant to this Order, (b) significant changes in conditions at the Site, or (c) emergency circumstances occurring at the Site pose a threat to human health or the environment, EPA may direct Respondents to stop further implementation of any actions pursuant to this Order or to take other and further actions reasonably necessary to abate the threat.

70. Nothing in the preceding paragraph shall be deemed to limit any authority of the United States to take, direct, or order all appropriate action to protect human health and the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances on, at, or from the Site.

Modifications

71. No informal advice, guidance, suggestion, or comment by EPA regarding reports, plans, specifications, schedules, or any other writing submitted by the Respondents shall relieve Respondents of their obligation to obtain such formal approval as may be required by this Order and to comply with all requirements of this Order unless formally modified.

Delay in Performance

- 72. Any delay in performance of this Order that, in EPA's judgment, is not properly justified by Respondents under the terms of paragraph 73 below, shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondents' obligations to perform all obligations fully under the terms and conditions of this Order.
- 73. Respondents shall notify EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone to EPA's OSC within forty-eight (48) hours after Respondents first knew or should have known that a delay might occur. Respondents shall take all reasonable steps to avoid or minimize any such delay. Within five (5) business days after notifying EPA by telephone, Respondents shall provide written notification fully describing the nature of the delay, any justification for the delay, any reason why Respondents should not be held strictly accountable for failing to comply with any relevant requirements of this Order, the measures planned and taken to minimize the delay, and a schedule for implementing the measures that have been or will

be taken to mitigate the effect of the delay. Increased cost or expense associated with the implementation of the activities called for in this Order is not a justification for any delay in performance.

Enforcement and Reservation of Rights

Respondents shall be subject to civil penalties under Section 106(b) of CERCLA, 42 U.S.C. § 9606(b), in the event that Respondents willfully violates, or fails or refuses to comply with this Order without sufficient cause. Such civil penalties shall be in an amount not greater than \$27,500 per day, subject to possible further adjustments of this penalty maximum consistent with the Debt Collection and Improvement Act of 1996, Pub. L. No. 104-134, 110 Stat. 1321 (1996), and the regulations promulgated thereunder, including the Civil Monetary Penalty Inflation Adjustment Rule, 61 Fed. Reg. 69360 (December 31, In addition, failure to properly carry out response actions under this Order, or any portion hereof, without sufficient cause, may result in liability under Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3), for punitive damages in an amount at least equal to, and not more than three (3) times the amount of any costs incurred by EPA as a result of such failure to take proper action. Should Respondents violate this Order or any portion thereof, EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606.

75. Nothing herein shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Order, from taking other legal or equitable action as it deems appropriate, or from requiring the Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law. EPA reserves the right to bring an action against Respondents under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order or the Site.

Other Claims

76. By issuance of this Order, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondents or Respondents' employees, agents, contractors, or consultants in carrying out any action or activity pursuant to this Order. The United States or EPA shall not be held out as or deemed a party

to any contract entered into by Respondents or their directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Order.

- 77. Nothing in this Order constitutes or shall be construed as a satisfaction of or release from any claim or cause of action against the Respondents or any person not a party to this Order for any liability that Respondents or other persons may have under CERCLA, other statutes, or the common law, including but not limited to any claims of the United States for injunctive relief, costs, damages, and interest under Sections 106(a) and 107 of CERCLA, 42 U.S.C. §§ 9606(a) and 9607. Nothing herein shall constitute a finding that Respondents are the only responsible parties with respect to the release and threatened release of hazardous substances at and from the Site.
- 78. Nothing in this Order shall affect any right, claim, interest, defense, or cause of action of any party hereto with respect to third parties.
- 79. Nothing in this Order shall be construed to constitute preauthorization under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2), and 40 CFR § 300.700(d).

<u>Insurance</u>

80. At least seven (7) days prior to commencing any Work at the Site, Respondents shall submit to EPA a certification that Respondents or their contractors and subcontractors have adequate insurance coverage or have indemnification for liabilities for injuries or damages to persons or property which may result from the activities to be conducted by or on behalf of Respondents pursuant to this Order. Respondents shall ensure that such insurance or indemnification is maintained for the duration of the Work required by this Order.

Financial Assurance

81. Respondents shall demonstrate their ability to complete the Work required by this Order and to pay all claims that arise from the performance of the Work by obtaining and presenting to EPA within twenty (20) days of the effective date of this Order one of the following: (1) a performance bond; (2) a letter of credit; (3) a guarantee by a third party; or (4) internal financial information to allow EPA to determine that Respondents have sufficient assets available to perform the Work. Respondents shall demonstrate financial assurance in an amount no less than the estimated cost of the Work to be performed by the Respondents under this Order. If EPA determines that the financial assurances submitted by Respondents pursuant to this paragraph are inadequate, Respondents shall, within fifteen (15) days after

receipt of notice of EPA's determination, obtain and present to EPA for approval additional financial assurances meeting the requirements of this paragraph.

Termination and Satisfaction

82. Upon a determination by EPA (following its receipt of the Final Report referred to in paragraph 51 above) that the Work required pursuant to this Order has been fully carried out in accordance with this Order, and that continuing access and oversight is no longer needed with respect to materials remaining at the Site, EPA will so notify Respondents in writing.

Opportunity to Confer, Effective Date

- 83. This Order shall be effective seven (7) days after receipt by Respondents, unless a conference is timely requested pursuant to paragraph 84 below. If such a conference is timely requested, this Order shall become effective one (1) day following the date the conference is held, unless the effective date is modified by EPA. All times for performance of ordered activities shall be calculated from this effective date.
- 84. Respondents may, within six (6) days after receipt of this Order, request a conference with EPA to discuss this Order. If requested, the conference shall occur within three (3) days of Respondents' request for a conference.
- 85. The purpose and scope of the conference shall be limited to issues involving the implementation of the work required by this Order and the extent to which Respondents intend to comply with this Order. This conference is not an evidentiary hearing, and does not constitute a proceeding to challenge this Order. It does not give Respondents a right to seek review of this Order or to seek resolution of potential liability, and no official stenographic record of the conference will be made. At any conference held pursuant to Respondents' request, Respondents may appear in person or by an attorney or other representative.
- 86. A request for a conference must be made by telephone to Brian E. Carr, Esq., Assistant Regional Counsel, Office of Regional Counsel, EPA Region II, telephone (212) 637-3170, followed by written confirmation mailed that day to Mr. Carr (the Site attorney) and the OSC at the addresses set forth in paragraph 50 of this Order.

Notice of Intent to Comply

87. Respondents shall provide, not later than five (5) days after the effective date of this Order, written notice to EPA stating whether they will comply with the terms of this Order. If Respondents do not unequivocally commit to perform the work

NOTICE OF PUBLIC AVAILABILITY

The United States Environmental Protection Agency (EPA) announces the availability for public review of files comprising the administrative record for the selection of the removal action at the Morgan Materials II Site. The EPA seeks to inform the public of the availability of the record file at this repository and to encourage the public to comment on documents as they are placed in the record file.

The administrative record file includes documents which form the basis for the selection of a removal action at this site. Documents now in the record file include: Administrative Order, Work Plan, Health and Safety Plan and the EPA Regional Guidance Documents. Other documents may be added to the record files as they become available. These additional documents may include, but are not limited to, other technical reports, validated sampling data, comments, and new data submitted by interested persons, and the EPA responses to significant comments.

The administrative record files are available for review during normal business hours at:

Buffalo Public Library 633 Elmwood Avenue Buffalo, NY 14222 (716) 833-6651

U.S. EPA - Region II Response and Prevention Branch 2890 Woodbridge Avenue Edison, NJ 08837 (732)321-6656

Additional guidance documents and technical literature is available at the following location:

U.S. EPA - Region II Removal Records Center 2890 Woodbridge Avenue Edison, NJ 08837 (732) 321-6647

Written comments on the Administrative Record should be sent to:

Gregory B. DeAngelis
On-Scene Coordinator
Response and Prevention Branch
U.S. EPA - Region II
2890 Woodbridge Avenue
Edison, NJ 08837

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EPA REGIONAL GUIDANCE DOCUMENTS

The following documents are available for public review at the EPA Region II Field Office, 2890 Woodbridge Avenue, Edison, New Jersey 08837 during regular business hours.

- Glossary of EPA Acronyms.
- * Superfund Removal Procedures--Revision #3. OSWER Directive 9360.0-03B, February 1988.
- Hazardous Waste Operations and Emergency Response.
 Notice of Proposed Rule making and Public Hearings.
 29 CFR Part 1910, Monday, August 10, 1987.
- * Guidance on Implementation of Revised Statutory Limits on Removal Action. OSWER Directive 9260.0-12, May 25, 1988.
- * Redelegation of Authority under CERCLA and SARA. OSWER Directive 9012.10, May 25, 1988.
- * Removal Cost Management Manual. OSWER Directive 9360.0-02B, April, 1988.
- Field Standard Operating Procedures (FSOP).
 #4 Site Entry.
 #6 Work Zones.
 #8 Air Surveillance.
 #9 Site Safety Plan.
- * Standard Operating Safety Guides -- U.S. EPA Office of Emergency and Remedial Response, July 5, 1988.
- * CERCLA Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Superfund).
- * SARA: Superfund Amendments and Reauthorization Act of 1986.
- * NCP: National Oil and Hazardous Substances Pollution Contingency Plan. Publication No. 9200.2-14.
- * Guidance on Implementation of the "Contribute to Efficient Remedial Performance" Provision Publication No. 9360.0-13.

Additional Guidance Documents are listed below and are available for review at the EPA Region II Removal Records Center.

- * The Role of Expedited Response Actions (EPA) Under SARA Publication No. 9360.0-15.
- * Guidance on Non-NPL Removal Actions Involving Nationally Significant or Precedent Setting Issues Publication No. 9360.0-19.
- * ARARS During Removal Actions Publication No. 9360.3-02.
- * Consideration of ARARS During Removal Actions -Publication No. 9360.3-02FS.
- * Public Participation for OSCs Community Relations and the Administrative Record Publication No.9360.3-05.
- * Superfund Removal Procedures Removal Enforcement Guidance for On-Scene Coordinators Publication No. 9360.3-06.
- * QA/QC for Removal Actions Publication No. 9360.4-01.
- * Compendium for ERT Air Sampling Procedures Publication No. 9360.4-05.